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ABSTRACT

This monograph attempts to describe the rural population as reported in the 1960 Census of Population and to evaluate the residence categories used. The hypothesis that the proximity to large metropolitan centers plays a crucial role in determining the characteristics of rural areas is applied. Substantive and analytical portions of the monograph assist in evaluating the utility and relevance of the rural-farm and rural-nonfarm residence categories. Questions raised by these considerations are: (1) how homogeneous are the populations that are now isolated by the application of existing definitions of these categories; (2) to what extent does the aggregated rural population display identifiable patterns in each region or division, and what effect does distance from a metropolitan area play on these patterns; and (3) what kind of a case can be made for the retention of current definitions of the populations according to residence? Included are: (1) a definition of rural America; (2) number and distribution of rural population; (3) age and sex composition of the rural population; (4) differential fertility; (5) factors related to fertility differences; (6) educational status; (7) employment of rural people; (8) income and earnings; (9) intercommunity differences in income; (10) summary and implications. The text is supplemented with statistical tables, charts, and graphs. Methodology is explained in the Statistical Appendix. (AH)

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People of RURAL AMERICA

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Prepared in cooperation with the
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FOREWORD

The Decennial Census of Population is the most important single source of information about social trends in the United States. Its data on the people and families who make up the population give an insight into the major social changes occurring in our country. Data on age, sex, color, and national origin provide the essential basis for determining the changes occurring in the composition of our population. The census results make it possible to learn much about the family organization, settlement patterns, education, work relationships, income, and other important characteristics of our people. Relationships such as that of age and education to occupation and industry, or of race and education to occupation and income, tell a great deal about how our society functions. The census provides an unequaled set of statistics to meet national and local needs. The advent of electronic computers has increased the availability of census results and the exploration of interrelationships which defied analysis previously.

The statistical reports resulting from a decennial census can supply only a fraction of the information and insights that are available from this important source. These reports present only those results which are believed to meet the general public needs. Comprehensive analyses of the results, and comparisons with other current data and with past censuses, open the door to many illuminating findings.

It has long been recognized that the public would reap additional benefits from its investment in the censuses if some of the analyses that are readily possible could be provided along with the basic data. A series of Census monographs was issued by the Bureau of the Census after the 1920 Census results had been published. A series of Census monographs followed the 1950 Census through the cooperation of the Social Science Research Council. These monographs filled a real need and were so well received that it was felt desirable to initiate plans for a similar series following the 1960 Census.

The Council again took the lead in the formulation of these plans in 1958 when it appointed a Committee on Population Census Monographs. This Committee included:

Dudley Kirk, Population Council, Chairman
Robert W. Burgess, Bureau of the Census
John D. Durand, Population Branch, United Nations
Ronald Freedman, University of Michigan
Daniel O. Price, University of North Carolina
John W. Riley, Jr., Equitable Life Assurance Society of the United States
George J. Stolnitz, Indiana University

Paul Webbink, of the Social Science Research Council, and Conrad Taeuber, of the Census Bureau staff, met regularly with the Committee, which reviewed proposals for Census monographs and aided in the selection of authors for specific publications.

The Council gratefully acknowledges a grant of funds from the Russell Sage Foundation for the planning and initiation of the program. The Foundation had provided similar assistance in the 1950 program.

In 1960, the Equitable Life Assurance Society of the United States, because of its concern with the expansion in knowledge of the everchanging structure and functioning of the larger society of the United States, began a program of basic social research. As one of the first steps in this development, it has joined in encouraging and supporting a series of studies of which this monograph is a part.

The assistance from the sources named above made it possible to arrange for the time of some of the authors and to provide special tabulations and statistical and research services which were essential to the preparation of the monographs.

This volume is the third in the 1960 Census Monograph Series. The two studies published earlier, and available from the Government Printing Office, are *Income Distribution in the United States*, by Herman P. Miller, and *Education of the American Population*, by John K. Folger and Charles B. Nam. Tentatively scheduled for future publication are *Changing Characteristics of the Negro Population, The American Family, The Metropolitan Community,* and *Population of the United States in the 20th Century.*

The program has received the active encouragement of scholars in the Federal Government and a number of universities, and we are glad to acknowledge the debt to these individuals and the institutions they represent. This cooperation was essential for the preparation of the monographs.

The monograph authors were asked to provide interpretations of census and related statistics that would illuminate major current problem areas. The authors were also asked to take a critical look at the data and to make any recommendations which in their opinion would contribute to better development and use of the data.

The views expressed in the monograph series are those of the individual authors, each of whom has been given the freedom to interpret available materials in the light of his technical knowledge and competence. These views are not necessarily those of the Bureau of the Census or the Social Science Research Council.

A. Ross Eckler, *Director*
Bureau of the Census

Pendleton Herring, *President*
Social Science Research Council

PREFACE

This monograph attempts to describe the rural population as reported in the 1960 Census of Population and to evaluate the residence categories used. In view of the rapid decline in the number of farms, the widespread dissatisfaction with portions of the residence classifications, and alterations in the residence definitions themselves, some systematic analysis appears necessary.

Starting with the statement that "one errs seriously to assume that the sole or even primary function of many rural areas today is agriculturally oriented," this study develops the hypothesis that the proximity to large metropolitan centers plays a crucial role in determining the characteristics of rural areas. This hypothesis is applied to data on selected demographic characteristics of the rural population. The text is supplemented with statistical tables, charts, and graphs. Methodology is explained in the appendix.

We wish to express our appreciation for assistance and criticism from numerous sources. Dr. Conrad Taeuber, of the Bureau of Census, who has long been interested in many facets of the rural population, raised many of the initial questions, and reviewed an early draft of the manuscript. Dr. Paul Webbink, of the Social Science Research Council, gave continuous support and interest to our concerns. Dr. Wilson H. Grabill, of the Bureau of Census, furnished valuable comment on the two chapters dealing with differential fertility. We also are in the debt of Dr. Horace Hamilton, of North Carolina University, and Dr. Philip Raup, of the University of Minnesota, for reading and criticizing an early draft of the entire manuscript.

We wish also to acknowledge the assistance of several graduate students at Michigan State University who worked in numerous ways on the data for this manuscript. Rodger Rice, now at Calvin College, and Asoka Andarawewa, now in Ceylon, worked on several chapters including those concerning fertility. John Stoeckel, now in Comilla, Pakistan, with the Population Council, prepared tables and figures and read many of the chapters. Mrs. Lou Ritchie furnished general editorial suggestions based on an early draft.

Helen W. Johnson edited the completed manuscript and recommended many helpful revisions.

The manuscript was prepared for printing in the Bureau of the Census. Sheldon M. Klein was responsible for the final editorial review of the manuscript, assisted by Lillian W. Bentel, who reviewed all tables, charts, and other illustrative materials, and prepared the copy for the printer.

Washington, D.C.
August 1968.

DALE E. HATHAWAY
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CHAPTER I

WHAT IS RURAL AMERICA?

Introduction

The title of this monograph implies that American society may be differentiated profitably on the basis of residence, that is, where people live. To ascertain the importance of this mode of categorizing the American population in 1960 is one of the major themes of this monograph. No one would take the position that rural-urban distinctions are sharper than they were, say, 50 years ago. There can be little question that the self-contained communities of farmers characteristic of the 1800's disappeared from the American scene long before the middle of the present century. Due to numerous causal phenomena, among them technological innovation, the ease of access to urban centers, and firmly fixed channels of farm-to-city migration, the styles of life of farm people in the 1960's appear to have merged with those of society at large.

The entities described by the terms "rural" and "urban" have become confused and obscured. Where one resides no longer carries with it an unchanged connotation of attributes that it once may have had. The functions of rural areas as well as the roles associated with them are multiple, and it could be a serious error to assume that the sole or even primary function of many rural areas today is agriculturally oriented. The underlying hypothesis reappearing throughout the monograph is that the location of rural areas with respect to a large metropolitan area is crucial in determining the character of rural areas.

The urban influence on rural areas

Rural America is viewed here as a relatively small, more or less functionally specialized and interdependent sector of a dominantly urbanized and industrialized society. Successive changes in technology, communication, and levels of living have broken down the isolation, solidarity, and local boundaries of rural communities in America. Perhaps the city has always served as the "pace setter" and model for the residents of rural and hinterland areas. But in the 1960's this phenomenon possesses a force that has been unequaled in the past. Among the most persuasive evidences are similarity of life styles, frequent contact with and participation in urban life, and identification with a unit the center of which is often a large metropolis.

In essence, rural America is regarded as representing the hinterland of a series of metropolitan regions. The rural portions of the Nation are viewed as being interdependent with the metropolitan centers, but the power to integrate, order, and control resides in the large centers. This concept of the ecological structure as applied to rural areas supersedes the long-held view of numerous local, relatively self-sufficient rural communities as the most significant natural entities blanketing the Nation.

That the United States is a highly urbanized and industrialized society can scarcely be denied. The elemental facts are that 70 percent of the population of the conterminous United States resided in areas classified as urban in 1960 and that employment in agriculture accounted for only 8.3 percent of all employment. But beyond these facts, it is our general hypothesis that metropolitan dominance shapes and determines important social and economic characteristics of the rural population.

T. W. Schultz has advanced an hypothesis which asserts that agricultural income is higher in areas adjacent to urban industrial development.[1] This view has been supported by the work of Nicholls and Tang, as well as by Ruttan.[2] Much of this work, however, dealt with a limited geographic area in the South, and there has been relatively little testing of this hypothesis on a national level.

Hypotheses concerning urban influence and metropolitan dominance are by no means new in sociological literature. Two which are current in sociological literature are the gradient principle and the principle of differentiation. The gradient principle asserts that the extent of urban-influenced change in rural areas varies directly with the size of the nearest city and inversely with the distance to that city. In his review of studies on this subject, Martin says:

> The findings of a number of studies show that these changes in the satellite rural areas conform consistently with the gradient principle of urbanization. In contrast, the evidence that these changes are consistent with the differentiation principle tends to be impressionistic and unsystematic.[3]

Important contributions to the study of the influence of metropolitan centers on rural areas and its gradient nature have been made by Bogue, Duncan and Reiss, Hawley, and others.[4]

Duncan and Reiss, for instance, found that counties ordered by metropolitan status and size of the largest urban place contained rural populations with sharply differing characteristics.[5] The fact that population characteristics vary in a more or less regular fashion with size of place and among rural areas containing different sized places is not surprising. Given persistent migration from rural to urban areas for many years, selectivity in the migration process, and the functional specialization of urban places, it is not unexpected that rural and urban population groups have different age, educational, and occupational composition. The question is, taking all of these things into account, does the proximity of a rural area to an urban area of a given size have an influence on the rural area apart from these observed differences in population characteristics? Is there support for the assertion that the degree of rurality in itself is a factor that explains some of the observed differences in such items as family income, personal income, and fertility rates? It is the underlying hypothesis of this study that such is the case, and most of the material that follows is either an explanation or testing of this hypothesis.

The rationale supporting urban influence. The economic rationale relating to urban influence over surrounding rural areas relates largely to the effects of urban industrial development on the income of rural people, especially farm people. It is assumed that this influence is exerted through the effects of urban industrial development upon both the product and input markets.

The influence of urban industrial development upon the product market is asserted to be largely a function of transportation costs. The domestic population consumes approximately 90 percent of the farm products sold annually by farmers. The major part of that consumption is accounted for by the urban population because of their greater numbers, higher incomes, and lower likelihood of having their own home-produced food. For farm products which are highly perishable, bulky, or both, transportation costs may be a significant factor in the retail price. Farmers immediately adjacent to urban areas, therefore, generally receive higher prices for such products than do producers of comparable products located farther from consumption centers.

It is generally felt that the influence of urban areas on factor markets in rural areas is of greater importance than upon product markets in influencing income levels. This operates in several ways. Most of the purchased inputs used by farmers are produced in urban industrial areas. It is believed that farmers adjacent to such areas enjoy somewhat lower prices for such inputs due to lower transportation costs. It also has been proposed that the capital market relating to agriculture "works better" in areas adjacent to urban industrial development. Presumably, this is because of greater availability of capital in such areas, more competitive conditions in the capital market, and superior institutional arrangements to facilitate the provision of capital to agriculture.

By far the greatest economic impact of urban industrial concentrations, however, is believed to be their effect upon the labor market. In general, farming in the United States can be typified as an industry having too much labor to allow it to earn incomes as high as labor receives elsewhere in the economy. Moreover, faced with the need for a continuing decline in the labor input because of new agricultural technology and the substitution of capital for labor, a chronic surplus of young people in excess of those needed to replace retiring members of the agricultural labor force is produced in rural areas.

Proximity to urban industrial concentrations probably affects the labor market in several ways. The opportunity for nonfarm employment provides an option other than agriculture for farm youth entering the labor market. It also provides an opportunity for persons working in agriculture to shift to part- or full-time nonfarm occupations. Such shifts may occur through migration or by long-distance commuting, of course, but in such cases the potential income gains are partially offset by the cost of relocating or commuting. Thus, assuming that all of the profitable shifts actually occur, we would expect to find higher incomes in rural areas adjacent to urban industrial areas due to the lower transfer costs involved in changing occupations.

Another important feature of the labor market is the information available to individuals regarding alternative opportunities. Despite substantial governmental expenditures on employment services, they tend to be local rather than regional or national in their scope. Much of the information regarding job opportunities, especially in the unskilled or semiskilled categories, is obtained from newspapers, personal contacts, and by word of mouth. Thus, it is to be expected that information regarding nonfarm employment opportunities would be better in rural areas adjacent to urban industrial concentrations than in areas farther removed from employment opportunities.

There is reason to expect that the size of the urban industrial concentration also may affect income through its own labor market. Such an expectation rests upon the long-known fact that the larger the market the greater the opportunity for specialization; with increased specialization, productivity improves and thereby generates rises in income. It follows that larger urban areas provide a demand for a greater variety of labor specialization. This in turn means that individuals in such a labor market are more likely to have an opportunity for employment that is to their greatest comparative advantage. In other words, in a highly diverse and specialized labor market there are likely to be fewer square pegs in round holes.

Thus, an empirical and theoretical basis can be laid for the hypothesis that rurality or its inverse, proximity to an urban industrial concentration, is a separate and distinctive factor affecting the income of rural families. This is among the hypotheses that were tested and will be dealt with in later sections of this monograph.

The propositions concerning urban influence on the hinterland are also rooted in human ecology and social change. Both Gras and McKenzie, based upon different materials and methods, have concluded that the metropolitan community is the most elemental form of social organization in America.[6] More than 40 years ago, according to Gras, the metropolitan economy had already become the modern form of social organization in Western civilization, one which had risen in association with a new technological order. Similarly, McKenzie, based upon a study of urbanization in the United States, reached the conclusion that the metropolitan region had become the most important unit of communal relations. Due to size, economies of scale, and specialization of functions, the metropolis is able to organize and influence the social and economic life within a large area. Since distance serves as an impediment in numerous ways, the influence of the metropolis is expected to diminish with increasing distance from it. Specialization and differentiation within the rural hinterland also are expected to decrease with increasing distance from the metropolitan center.

The exposure of rural residents in the United States to urban life through personal contact and through mass media probably has not been equaled elsewhere in the world. In the words of Comhaire and Cahnman:

> The industrial society in which we live is urban through and through, especially in the United States, where the farmer is a businessman who keeps a sharp eye on domestic and world markets, applies scientific methods in seeding and feeding, owns a car and a television set, and has his wife and daughter dressed according to the latest fashion. . . . Ecologically speaking, the American farmer does not live in a city, yet his ways are citified. He is of the city even though he is not in the city.[7]

Despite the comparative truth of this assertion, rural residents in the United States are not equally exposed to, or affected by, urban life and values. The extent of exposure to urban areas, through both personal contact and mass media is, to a large extent, a function of distance.

It is also a basic proposition that urban-influenced changes in rural areas are related to the size of the urban center. Larger cities are likely to be more differentiated economically and culturally than smaller cities. The mass media systems of large cities, for example, are apt to be more numerous, diverse, and powerful than the comparable media of smaller cities. The point of origin of a large proportion of all network radio and television programs, as well as of magazine and book publishing, is the large city. Such considerations undergird the proposition that urban influence on rural areas is closely related not only to city size but also to distance from large centers.

Definition of rural and urban residence

To a very considerable extent, knowledge about the people of rural America is governed by the definitions of residence groups adopted by the census of population, together with those of the census of agriculture. It is by deliberate choice that the Census Bureau's definitions of rural-farm, rural-nonfarm, and urban residence are used throughout the analyses in this monograph. Our purpose is as much to evaluate the meaning and usefulness of these definitions as it is to describe the populations defined by them. It is necessary, therefore, that the 1960 residence categories be made explicit.

The 1960 Census of Population defines the urban population as

> . . . all persons living in (*a*) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York, and Wisconsin); (*b*) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas . . .; (*c*) towns in New England and townships in New Jersey and Pennsylvania which contain no incorporated municipalities as subdivisions

and have either 25,000 inhabitants or more or a population of 2,500 to 25,000 and a density of 1,500 persons or more per square mile; (*d*) counties in States other than the New England States, New Jersey, and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of 1,500 persons per square mile; and (*e*) unincorporated places of 2,500 inhabitants or more.[8]

The population living outside of the areas classified as urban was classified as rural, with a further division into rural-farm and rural-nonfarm. The farm population consists of people living in rural territory on places of 10 or more acres from which sales of farm products amounted to $50 or more in 1959, or on places of less than 10 acres from which the sales of farm products amounted to $250 or more in 1959. This was essentially the same definition used for the 1959 Census of Agriculture, except that in that census some farms not meeting the minimum criteria were included because they normally could be expected to meet these criteria, and farms in urban areas were counted. Thus, persons living outside of urban areas on places classified as farms were in the rural-farm population; all other persons living outside of urban areas were classified as rural-nonfarm residents.

The authors believe that the rural-farm population in 1960 was a relatively homogeneous aggregate, although the definition may no longer be an especially useful one. While the procedures of 1950 and earlier relied upon respondents' opinions to determine their rural-farm residence, the 1960 procedures relied upon explicit criteria involving acreage and value of farm products sold. Hence, direct comparisons of the rural-farm population over time cannot be made. It has been estimated that a net reduction of 4.2 million (or about one-fifth) occurred in the rural-farm population due to the use of the 1960 rather than the 1950 definition. Persons removed from the rural-farm population by the new definition included: (1) an estimated 3.0 million whose places in 1960 did not meet the acreage and value-of-products criteria, but who had reported themselves as residing on farms in the previous census; (2) about 1.5 million open-country residents paying cash for home and yard only, who should not have been included even under 1950 procedures; and (3) an estimated 0.9 million persons whose classification changed because acreage and value of products sold were too small to meet the 1959 definitions, but who had qualified under previous definitions. Thus, the net reduction of 4.2 million persons resulted from a gross deletion of 5.4 million persons and a gross addition of 1.2 million persons.[9]

The rural-nonfarm residence category in 1960 was a heterogeneous, residual aggregate. Several classes within this residence type may be specified: (1) residents of small towns, villages, and hamlets insufficiently large to be classed as urban; (2) residents of the open country who do not meet the requirements of rural-farm residence; and (3) residents of "fringe" areas, especially those outside of the incorporated limits of cities under 50,000 in size. As pointed out by Whitney, to refer to this population as "rural" creates serious semantic difficulties since a major part resides in fringe areas around cities.[10]

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This analysis emphasizes both rural-farm and rural-nonfarm components of the population as defined by the Census Bureau in 1960, treating them separately, and comparing them with each other as well as with the urban population. Much of the comparative material covers the entire population of the conterminous United States, even though the emphasis is upon that portion classified as rural.

Developing measures of rurality

One of the major tasks in this research was the development of an appropriate measure of the degree of rurality in the United States. The problem was one of measuring shades or varying intensities of rurality apart from reliance upon Census definitions of rural and urban. In facing the problems of developing such a measure, we concluded that the population classified by the Census as rural or rural-farm contains a spectrum of rurality which must be further delineated. Some alternatives, as well as the methods used to delineate the concept of rurality, are outlined in the following paragraphs.

Some researchers have used the proportion of the labor force engaged in farming as a measure of rurality. While this single index has some validity, it evades many issues and imputes an excessively narrow conception to the phenomenon of rurality. The use of the percentage of the labor force employed in agriculture as the measure places undue importance upon farming when our interests extend to dimensions broader than occupation as a causal element in the explanation of population differences. While we have not used occupation in our measures of rurality, the analysis of rural occupational categories has not been neglected. Farming as an occupation is unique in many ways. For example, it has unusual economic relationships relating to the value of family labor, thus affecting such phenomena as family size, school attendance, and labor force participation. Farming may also instill orientations to life substantially different from other occupations.

Three measures of rurality were developed which quantify the situation of a given county area in terms of its distance from a standard metropolitan statistical area (SMSA) and the size of the SMSA involved.[11] Each measure reflects somewhat different assumptions regarding the effect of urban influence on surrounding areas.

These measures of proximity of a county to urban areas have several elements in common. First, they used SMSA's as reference points. This was done for several reasons. The problem of computer programing was simplified by the use of SMSA's as reference points, inasmuch as the SMSA's were identified on the Census data tapes. Also, it was assumed that unless an urban industrial concentration had at least 50,000 population it would be too small to influence the surrounding areas in major ways. Second, all of the distance measurements were in 50-mile bands. This interval was chosen because it represents approximately an hour in commuting time. Third, the measurement was applied to all county units. The reason for using counties as units was that the data were not available on computer tapes for geographic units of the rural-farm population below the county level. Even if available, the development of the rurality variable and the computer programing for areas smaller than county units on a national scale would have been prohibitively expensive for this project.

The first of the measures of rurality is simply the distance of a county from the nearest SMSA. This measure was developed by drawing circles having a radius of 50 miles, 100 miles, 150 miles, etc., from the geographical center of the largest city in each SMSA in the United States. Each SMSA county was assigned the value of zero. Each non-SMSA county which fell within a circle of 50-mile radius was assigned the value of 1; each county falling within the band 50 to 99 miles from the nearest SMSA was assigned the value of 2, etc.

Whenever a non-SMSA county was assigned two or more values of the distance measure on the basis of distance from more than one SMSA central city, the lowest value assigned was taken as the distance measure assigned. Using this method, each county in the conterminous United States was assigned a value from 0 to 6. No county was more than 300 miles from an SMSA in 1960.

Table I-1 shows the numerical distribution of counties in the United States, by regions and divisions, classified according to the procedures just outlined. A map of the United States (fig. I-1) depicts counties categorized by this distance measure. More than 40 percent of all counties are located in a band ranging from 50 to 99 miles from an SMSA; only about one-fourth are 100 miles or more from an SMSA. The most remote counties, as expected, are in the West North Central, Mountain, and Pacific Divisions.

Table I-1.—DISTRIBUTION OF COUNTIES BY DISTANCE-VALUE ASSIGNED, BY REGIONS AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Distance value assigned[1]	United States	Region				Division								
		Northeast	North Central	South	West	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total	3,073	217	1,055	1,387	414	67	150	436	619	553	364	470	281	133
0	347	83	96	125	43	26	57	65	31	58	20	47	17	26
1	629	58	230	328	13	10	48	163	67	161	94	73	9	4
2	1,342	55	383	814	90	14	41	154	229	292	222	300	45	45
3	423	13	185	116	109	10	3	42	143	42	28	46	77	32
4	173	7	74	4	88	6	1	9	65	-	-	4	70	18
5	93	-	45	-	48	-	-	3	42	-	-	-	42	6
6	66	1	42	-	23	1	-	-	42	-	-	-	21	2

— Represents zero.

[1] For explanation of distance-value assigned, see note 12, page 17.

The two other measures of rurality used in the analysis took size of population as well as distance into account when categorizing differences. Each county, whether in an SMSA or not, was assigned a numerical value on a scale ranging

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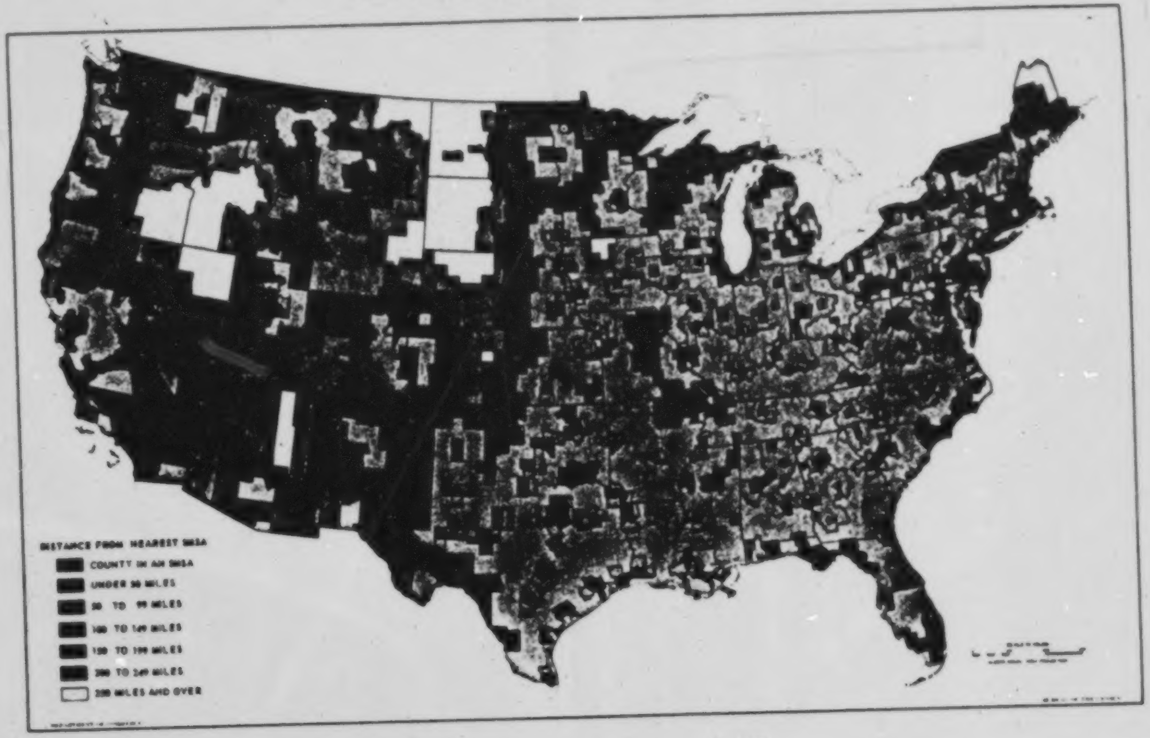
Figure I-1.--RURALITY OF COUNTIES IN THE CONTERMINOUS UNITED STATES MEASURED BY DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA: 1960


DISTANCE FROM NEAREST SMSA
COUNTY IN AN SMSA
UNDER 50 MILES
50 TO 99 MILES
100 TO 149 MILES
150 TO 199 MILES
200 TO 249 MILES
250 MILES AND OVER

p 10 blank

from 0 to 20 in accordance with a detailed set of rules designed to measure and graduate the influence of SMSA's on one another and on non-SMSA counties.[12] These rules are in keeping with the assumption that urban influence radiates from large metropolitan agglomerations to diminish the rurality of counties within a certain orbit of dominance, and that the effect of this influence on particular counties may be expressed as a linear function of both the size of the metropolitan agglomerate and the distance between it and the counties it influences.

In many areas, especially in the eastern portion of the United States, cities of varying sizes are found close to one another. The urban or rural character of counties with smaller cities located close to larger cities in nearby counties is certain to be influenced to some extent by both internal and external social and economic forces, and the rules for assigning scale values take this into account. At the same time, however, the rules place a limit on the arithmetic of multiple influence on a county by providing that external influence shall not be weighed so heavily that the influenced county is assigned a scale value greater than that of the external area which influences it.

The justification for limiting the upper value assigned any county is related to our hypothesis regarding the way in which urban influence is transmitted. While it was hypothesized that the size of the dominant urban industrial area was important in determining its influence, it was also felt that, at some point, increases in population merely reflect duplications of functions and conditions that exist in areas having a very large population. It was decided arbitrarily that an SMSA having 2 million population would have the essential economic and social conditions to exert a maximum influence over the adjacent rural areas. On a more practical level, some device was necessary to prevent the few largest SMSA's from overpowering all of the other areas.

Regarding the assumptions of linear relationships in the size and distance functions, there was no evidence at hand that other relationships would be more valid. The fact that population characteristics of cities vary in a nonlinear manner has little relevance because our concerns are the extent of urban influence on rural areas and the development of a measure of rurality apart from observed characteristics. Based on our hypothesis of how urban influence is transmitted, linear relationships appeared as valid as any other. Moreover, they are much simpler to deal with in computer programing and are more easily explained. In any case, part of the purpose of the research was to obtain evidence regarding the nature of the relationships.

Thus, two size-distance measures of rurality were developed. They differ only in the assumption as to the maximum distance that an SMSA of 2 million extends its influence. In one case it was assumed, in effect, that the maximum area of influence was 500 miles; in the other, that the maximum was 200 miles. Placed in a somewhat different context, the first measure assumes that each distance of 50 miles reduces urban influence in an area by the *same amount* as do 200,000 fewer people in the city. The second size-distance measure assumes that each distance of 50 miles from the influencing urban area is equivalent to 400,000 fewer people in the influencing county. The two measures will be referred to as size-distance$_1$ and size-distance$_2$.

Each of these measures of proximity to urban areas was used extensively in separate analyses. After viewing the results, it was decided that they would be reported for two measures only, namely, simple distance and size-distance$_1$ because little difference emerged in the results of analyses using the size-distance$_1$ and size-distance$_2$ measures. Where differences occurred, in our judgment the results using the size-distance$_1$ measure were more plausible. Throughout the remainder of the monograph, the two measures actually used and reported will be referred to simply as "distance" and "size-distance."

Table I–2 summarizes the numerical distribution of counties in the United States, by region and division, according to size-distance$_1$ values. Figure I–2 shows counties of the conterminous United States categorized by the size-distance values assigned them. A large proportion of high value counties, that is, those counties assumed to be the least rural, are located in those divisions having the largest cities, notably the Middle Atlantic and East North Central Divisions. Counties having values of less than 10, and therefore assumed to be the most

Table I–2.—DISTRIBUTION OF COUNTIES BY VALUE OF THE SIZE-DISTANCE MEASURE ASSIGNED, BY REGIONS AND DIVISIONS FOR THE CONTERMINOUS UNITED STATES: 1960

Size-distance measure assigned[1]	United States	Region				Division								
		Northeast	North Central	South	West	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total	3,073	217	1,055	1,387	414	67	190	436	619	553	364	470	281	133
0	525	-	162	148	215	-	-	-	162	39	15	94	201	14
1	162	-	36	95	31	-	-	-	36	32	13	50	24	7
2	154	-	25	111	18	-	-	1	24	44	27	40	6	12
3	141	-	31	89	21	-	-	-	31	23	20	46	14	7
4	248	1	33	196	18	1	-	4	29	80	64	52	8	10
5	119	-	36	65	18	-	-	1	35	6	9	50	7	11
6	251	3	43	198	7	3	-	13	30	78	72	48	4	3
7	81	-	36	33	12	-	-	5	31	4	7	22	6	6
8	223	6	57	154	6	2	4	11	46	47	72	35	2	4
9	63	-	45	12	6	-	-	10	35	1	5	6	5	1
10	222	21	98	95	8	8	13	55	43	47	34	14	2	6
11	48	1	31	10	6	-	1	8	23	1	-	9	-	6
12	220	27	122	55	16	10	17	84	38	31	20	4	2	14
13	15	3	7	5	-	1	2	4	3	4	1	-	-	-
14	246	38	148	48	12	9	29	121	27	46	2	-	-	12
15	16	3	10	2	1	2	1	9	1	1	1	-	-	1
16	168	41	77	45	5	8	33	65	12	45	-	-	-	5
17	13	5	8	-	-	1	4	8	-	-	-	-	-	-
18	25	7	6	9	3	3	4	6	-	6	-	-	-	3
19	18	7	11	-	-	3	4	6	5	-	-	-	-	-
20	115	54	33	17	11	16	38	25	8	15	2	-	-	11

— Represents zero.

[1] For explanation of derivation of size-distance measures, see note 12, page 17.

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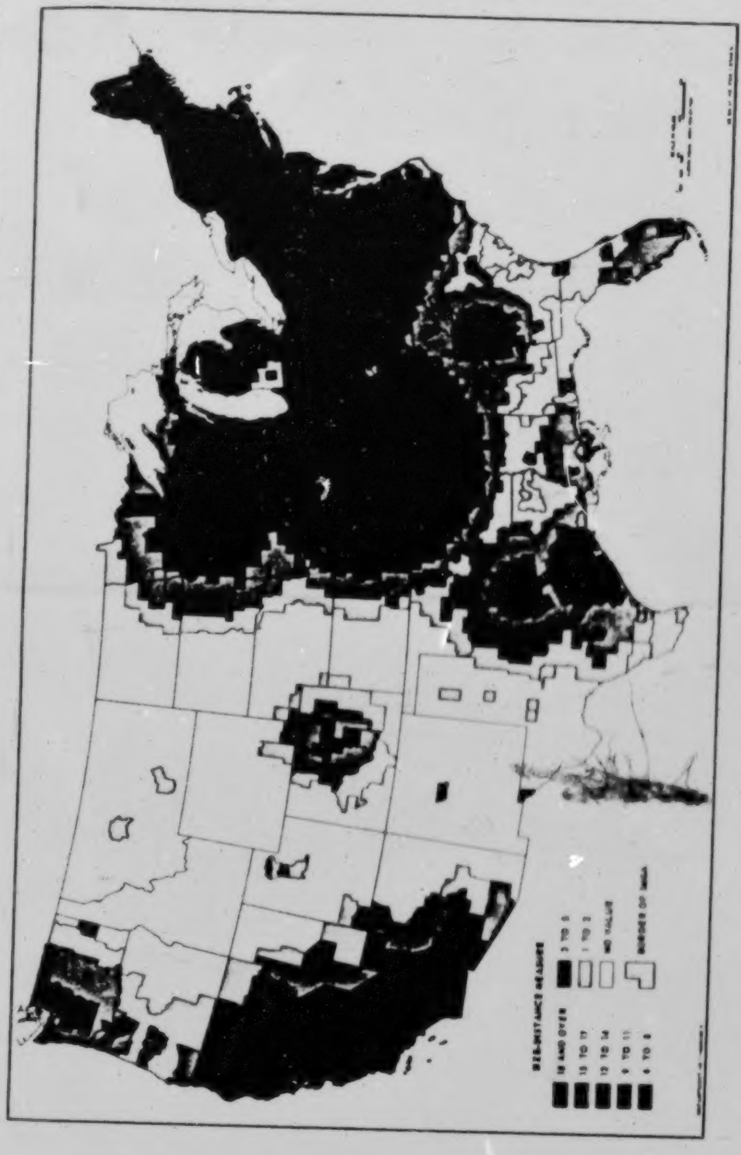
SIZE-DISTANCE MEASURE
18 AND OVER
15 TO 17
12 TO 14
9 TO 11
6 TO 8
3 TO 5
1 TO 2
NO VALUE
BORDER OF

Figure I-2.—Rurality of Counties in the Conterminous United States Measured by Size-Distance Scale: 1960

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rural, are rare indeed in these two divisions. The lowest size-distance values in the Nation, it will be noted, are found in the Mountain, West North Central, and West South Central Divisions.

Several uses have been made of the two measures representing rurality. Data describing rural America use the distance and size-distance measures. For example, characteristics such as age, sex, years of school completed, and the occupation and industry group are shown in tables based upon the distance or the size-distance measure. Perhaps the greatest use made of these measures was in the regression equations designed to explain intercounty differences in family income, earnings of farmers and farm managers, and fertility rates. These equations (chapters V, IX, and the appendix) all included one or more variables representing the importance of farming as an occupation and one variable representing rurality. The regression equations were developed in large part to test the hypothesis that such factors had an independent influence on observable differences in population characteristics, apart from the other differences. Since the equations were run separately, with each of the rurality measures, the results provide considerable insight into the nature of the relationships as well as their magnitude.

The organization of the monograph

This monograph has at least three purposes. They are: (1) to describe the characteristics of that portion of the population classified by the Bureau of the Census as rural-farm and rural-nonfarm, comparing and contrasting each with the other as well as with the urban population in 1960; (2) to analyze the reasons for the observed differences within the rural population components and between the urban and the rural population components; and (3) to test several economic and sociological hypotheses regarding the effect of urban dominance upon the rural areas of the United States. In addition, as a byproduct, we test our ability to explain observed differences within the urban population of the United States by using the same variables as in the analysis of the rural areas. We anticipate that the results of our analyses will be of particular significance to researchers interested in the use of computers in analysis of census data.

Chapter II deals with the number and distribution of the rural population, by color, in 1960. Each of the rural components receives attention, trends in rural population size are outlined, and selected socioeconomic and demographic characteristics are described and analyzed. Chapter III is devoted to the age and sex composition of the rural population; chapter IV, to differential fertility; chapter V, to the explanation of fertility differences; chapter VI, to school enrollment and educational attainment; chapter VII, to occupation and industry groups; chapter VIII, to family income and earnings; and chapter IX, to a discussion of family income variations. As indicated previously, results are also reported in these chapters for the urban as well as the rural population. A final chapter attempts to summarize the major findings, to evaluate the Census definitions of residence, and to speculate concerning the meaning of some of our results.

NOTES

[1] T. W. Schultz, *Economic Organization of Agriculture* (New York: McGraw-Hill Book Company, Inc., 1953).

[2] William H. Nicholls, "Industrialization, Factor Markets, and Agricultural Development," *Journal of Political Economy*, vol. 69 (August 1961), and Vernon W. Ruttan, "The Impact of Urban Industrial Development on Agriculture in the Tennessee Valley and the Southeast," *Journal of Farm Economics*, vol. 37 (February 1955).

[3] Walter T. Martin, "Ecological Change in Satellite Rural Areas," *American Sociological Review*, vol. XXII (1957), p. 182.

[4] R. D. McKenzie, *The Metropolitan Community* (New York: McGraw-Hill Book Company, Inc., 1933); Donald J. Bogue, *The Structure of the Metropolitan Community* (Ann Arbor: Horace H. Rackham School of Graduate Studies, University of Michigan, 1950); Amos H. Hawley, *The Changing Shape of Metropolitan America* (Glencoe: The Free Press, 1956); O. D. Duncan and A. J. Reiss, Jr., *Social Characteristics of Urban and Rural Communities, 1950* (New York: John Wiley and Sons, Inc., 1956); O. D. Duncan, "Gradients of Urban Influence on the Rural Population," *Midwest Sociologist*, vol. 18 (1956), pp. 27–30; O. D. Duncan, *et al.*, *Metropolis and Region* (Baltimore: Johns Hopkins Press, 1960); E. T. Hiller, "Extension of Urban Characteristics into Rural Areas," *Rural Sociology*, vol. 6 (September 1941), pp. 242–257; W. S. Thompson and N. E. Jackson, "Fertility in Rural Areas in Relation to Their Distance from Cities, 1930," *Rural Sociology*, vol. 5 (June 1940), pp. 143–162; and James D. Tarver, "Ecological Patterns of Land Tenure, Farm Land Use, and Farm Population Characteristics," *Rural Sociology*, vol. 28 (June 1963), pp. 128–145.

[5] Duncan and Reiss, *ibid.*, chapter 13.

[6] N.S.B. Gras, *An Introduction to Economic History* (New York: Harper and Brothers, 1922); R. D. McKenzie, *op. cit.*

[7] Jean Comhaire and Werner J. Cahnman, *How Cities Grew* (Madison, N.J.: The Florham Park Press, Inc., 1959), p. 1.

[8] U.S. Bureau of the Census, *U.S. Census of Population: 1960*, Vol. I, *Characteristics of the Population*, Part 1, United States Summary (Washington, D.C.: U.S. Government Printing Office, 1964), p. xviii. (For further elaboration, see pp. xxvi-xxxviii.)

[9] "Effect of Definition Changes on Size and Composition of the Rural-Farm Population, April 1960 and 1959," *Farm Population*, Census-AMS, Series P-27, No. 28, April 17, 1961.

[10] Vincent H. Whitney, "Rural-Urban People," *The American Journal of Sociology*, vol. LIV, No. 1 (July 1948), pp. 48–54. Calvin Beale, "Farm Population as a Useful Demographic Concept," *Applications of Demography: The Population Situation in the U.S. in 1975* (Miami and Chicago: Scripps Foundation and Population Research and Training Center, 1957) pp. 39–45; and J. Idenburg and J. Schmitz, "A New Approach to the Urban-Rural Classification," *The International Statistical Institute* (Tokyo: 32d Session, 1960).

NOTES—Continued

[11] A standard metropolitan statistical area is a county or counties having at least one city with a population over 50,000, or two cities having contiguous boundaries with a combined population of over 50,000, or a county which is metropolitan in character adjacent to a county with such a city. For further details see "Area Classifications," in Introduction of the *1960 Census of Population, General Social and Economic Characteristics*, Series PC(1), p. VII.

[12] Each county in the United States was assigned a size-distance measure as a basis for a classification of counties by degree of rurality in accordance with the following definitions, rules, and procedures. The measure was designed to place each county on a scale from 0 to 20, the lower limit conforming to maximum, and the upper limit to minimum rurality. The values of the size-distance measures assigned to particular counties depend upon the spatial relationship between the county and one or more SMSA's, which by their proximity to the county have some influence over its degree of rurality.

1. If an SMSA has but one county it is assigned an integral value on this scale according to the size of its population, to the nearest 100,000. Thus, a county of 621,318 inhabitants which is the sole county of an SMSA is assigned a value of 6, one with 651,318, a value of 7, etc. Counties with more than 2 million population are assigned the value 20, no matter how great the actual population may be.

2. In an SMSA with more than one county, the one containing the central city or the largest of two or more central cities is called the dominant county of the SMSA. The scale value assigned to it and all other counties constituting the SMSA is based on the total population of the SMSA to the nearest 100,000, as in rule 1, above. Hence, every county in the SMSA, no matter what its actual population or geographical situation, is assigned the same scale value as determined by the size of the population of the entire SMSA.

3. A county not in any SMSA is assigned a scale value based in part on its distance from one or more SMSA's which may have an influence on its degree of rurality and, in part, on the size of each such SMSA. The scale value to be assigned is based on concentric circles having their common center in the geographical center of the largest central city of each SMSA. These circles have radii which are integral multiples of 50 miles. Two such scales have been used. The "linear-2" scale assigns to the circle of 50-mile radius a scale value equal to the scale value of the SMSA minus 2. The band of territory between the circles of 50- and 100-mile radii has the scale value of the SMSA minus 4, etc. Thus, a "linear-2" scale for an SMSA with a scale value of 10 will comprise a circle of 50-mile radius with a scale value of 8, and 3 successive circular bands with scale values of 6, 4, and 2, respectively. The "linear-4" scale for the same SMSA would comprise an inner circle of 50-mile radius with a scale value of 6, and one band with a scale value of 2.

4. Counties not in SMSA's are assigned scale values as follows:

a. If a county lies entirely within a circular band from one SMSA, and no band of another SMSA covers it, even in part, its scale value is that of the band which covers it.

b. If a county is completely covered by two or more circular bands from one SMSA, and no band of another SMSA covers it, even in part, it is assigned the scale value of the covering band with the highest scale value.

c. If a county is completely covered by partially overlapping bands of the same scale value from two or more SMSA's, but is not covered completely by any one of these bands, the common scale value of the overlapping bands is assigned as the scale value of the county.

NOTES—Continued

d. If any part of a county is not covered by any band, the county is assigned a scale value of zero.

5. When two or more SMSA's are spatially located so that bands from a larger SMSA cover part or all of the territory of a smaller SMSA, the scale value assigned to each of the counties of the smaller SMSA may be increased to take into account the influence of the larger SMSA on the smaller. This occurs when the dominant county of the smaller SMSA is completely covered by one or more bands from one or more larger SMSA's. The procedures of rule 4, above, are used to determine the band value to be added to the scale value of the dominant county of the smaller SMSA. Once the scale value of the dominant county is so augmented, it becomes the scale value of each other county of the smaller SMSA in accordance with the principle that all counties of an SMSA must have the same scale value. However, it is not possible under this framework to have the counties of the smaller SMSA attain scale values exceeding those of the larger SMSA's whose band values influence the smaller SMSA's. Should this occur, the scale values of the counties of the smaller SMSA are reduced to those of the larger SMSA. For example, if the counties of one SMSA have a scale value of 9 because the entire SMSA has a population of 920,000, and the dominant county lies entirely within a band of scale-value 7 from another SMSA of scale-value 11, the normal application of these rules would lead to the assignment of a scale value of 9 plus 7, or 16, for each county of the smaller SMSA. Since the scale value of the larger SMSA, whose bands have augmented the scale value of the smaller SMSA, is only 11, each county of the smaller SMSA is assigned the scale-value 11.

6. An SMSA may have its scale value augmented by virtue of its proximity to a larger SMSA and, at the same time, have bands of its own which contribute to the scale value of still other counties in other SMSA's or in no SMSA.

CHAPTER II

NUMBER AND DISTRIBUTION OF THE RURAL POPULATION

Introduction

The transformation of America from a rural, agricultural economy to an urban, industrial one is among the more significant changes in American history. The highly urban quality of contemporary American life belies a long history of life in small rural communities, often under isolated frontier conditions. At the time of the Revolutionary War, settlements west of the Atlantic Seaboard States were rare, and even as late as 1850, rural settlements beyond the Mississippi River were still sparse. Until the middle of the last century, approximately 9 out of 10 persons were in the rural population. More than half of the population was classed as rural until 1920.

High rates of population growth, due to both natural increase and immigration, prevailed from 1790 to 1960. While the rural population shared in the general population growth throughout this period, its rate of growth rarely approached that of the urban population. Hence, by 1960, only about 3 persons in 10 were classified as rural and considerably fewer than 1 in 10 as rural-farm.

This chapter deals with changes in the rural population and its component parts,[1] as well as the distribution, color, and racial composition of the rural segment of the Nation's population in 1960.

Trends in the rural population

Changing definitions of residence, especially those of the recent past, preclude an explicit and definitive tracing of trends for all residence groups. Despite the difficulties engendered by changed definitions, no one would deny the longtime decline in the relative numerical importance of the rural population in the United States. The two rural residence categories with which we are especially concerned, farm and nonfarm, were used on a full scale in 1930 following some experimentation with them in the 1920 Census. The definitions used to distinguish rural-farm from rural-nonfarm populations remained unchanged until the 1950 Census. Major changes were then made in the definitions of the urban and rural-farm categories. These had a marked impact upon the rural-nonfarm population. In the 1960 Census, additional major changes in the definitions of the rural-farm and the urban populations introduced new elements into the residence categories.[2] Efforts to overcome the incomparabilities resulting from some of these changes have been incomplete and not entirely successful.

Changes in the rural-farm and rural-nonfarm populations. Changes in the rural-farm and rural-nonfarm populations of the United States since 1930 are summarized in table II–1. The population classified as rural-nonfarm increased from 23.6 million in 1930, to 27.0 million in 1940. In the next 10 years it grew to 38.6 million, defined in the same way as in the previous censuses. By 1960 it numbered 40.3 million persons, but the definition had changed and there is every likelihood that this figure is not comparable with those from earlier censuses. While the rural-nonfarm population has become more homogeneous as a result of definitional changes, no serious claim of even moderate homogeneity can yet be made. Furthermore, changes in definition have served to greatly moderate the apparent growth rate of this segment of the population.

The rural-farm population, as shown in table II–1, increased slightly between 1930 and 1940, but the percent it comprised of the total population actually decreased. The numbers stood at 30.1 million in 1930, and 30.2 million in 1940. By 1950, under a revised Census definition, the rural-farm population dropped to 23.0 million. Again, with the radically changed definition used in 1960, the

Table II-1.—DISTRIBUTION OF THE POPULATION BY URBAN, RURAL, AND FARM RESIDENCE, FOR THE CONTERMINOUS UNITED STATES: 1930 TO 1960

[For current and previous urban definitions and changes in definition of farm population between 1950 and 1960, see text]

Residence	1960		1950		1940	1930
	Current urban definition	Previous urban definition	Current urban definition	Previous urban definition		
Total	[1]178,466,732	178,466,236	150,697,361	150,697,361	131,669,275	122,775,046
Nonfarm	(NA)	(NA)	127,365,623	127,365,623	101,122,364	92,329,696
Farm	(NA)	(NA)	23,331,738	23,331,738	30,546,911	30,445,350
Urban	124,714,055	112,531,961	96,467,686	88,927,464	74,423,702	68,954,823
Farm	(NA)	(NA)	283,388	255,199	330,723	287,837
Rural	53,752,677	65,932,295	54,229,675	61,769,897	57,245,573	53,820,223
Nonfarm	40,320,886	(NA)	31,181,325	38,693,358	27,029,385	23,662,710
Farm	13,431,791	(NA)	23,048,350	23,076,539	30,216,188	30,157,513
PERCENT DISTRIBUTION						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Nonfarm	(NA)	(NA)	84.5	84.5	76.8	75.2
Farm	(NA)	(NA)	15.5	15.5	23.2	24.8
Urban	69.9	63.1	64.0	59.0	56.5	56.2
Rural	30.1	36.9	36.0	41.0	43.5	43.8
Nonfarm	22.6	(NA)	20.7	25.7	20.5	19.3
Farm	7.5	(NA)	15.3	15.3	22.9	24.6

NA Not available.

[1] Based on 25-percent sample.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part I, United States Summary, tables 3 and 65 (adjusted to exclude data for Alaska and Hawaii); 1950 Census of Population, Vol. II, *Characteristics of the Population*, Part I, United States Summary, table 34.

rural-farm population dropped to only 13.4 million persons. Over the three decades covered by these figures the rural-farm portion of the total population declined rapidly from 24.6 percent in 1930 to 7.5 percent in 1960.

The Department of Agriculture has made annual and quinquennial estimates of the farm population dating from 1910. These are given in table II–2. According to these estimates, the farm population numbered approximately 32.4 million prior to the First World War and comprised about one-third of the total population. By 1930 it had dropped to 30.5 million, or approximately one-fourth of the national population. During the depression, the farm population increased substantially, only to decline again to predepression levels during the later years of the 1930's. The decade of the 1940's saw a radical decline in the farm population. In 1950 the farm population stood at 23 million, or less than one-sixth of the total population. Since then the decline has been unrelenting, some loss occurring in virtually every year. By 1964, the farm population of the United States, including Alaska and Hawaii, stood at 12.9 million, or 6.8 percent of the total population. Further decreases in the farm population appear to lie ahead.

Table II–2.—Annual and Quinquennial Estimates of the Farm Population, for the United States: April 1910 to 1964

Year	Farm population[1]	Percent of total population	Year	Farm population[1]	Percent of total population
1964[2]	12,954,000	6.8	1952	21,748,000	13.9
1963[2]	13,367,000	7.1	1951	21,890,000	14.2
1962[2]	14,313,000	7.7	1950	23,048,000	15.3
1961[2]	14,803,000	8.1	1945	24,420,000	17.5
1960[2]	15,635,000	8.7	1940	30,547,000	23.2
1959[3]	16,592,000	9.4	1935	32,161,000	25.3
1958	17,128,000	9.9	1930	30,529,000	24.9
1957	17,656,000	10.4	1925	31,190,000	27.0
1956	18,712,000	11.2	1920	31,974,000	30.1
1955	19,078,000	11.6	1915	32,440,000	32.4
1954	19,019,000	11.8	1910	32,077,000	34.9
1953	19,874,000	12.5			

[1] Includes the Armed Forces overseas except for 1910, 1915, 1920, 1925, 1930, and 1935. Data for those years relate only to persons residing in the Continental United States; numbers in the Armed Forces overseas were fairly small.

[2] Includes Alaska and Hawaii.

[3] Includes Alaska.

Source: Vera J. Banks, Calvin L. Beale, and Gladys K. Bowles, *Farm Population Estimates for 1910–64*, U.S. Department of Agriculture, Economic Research Service (Washington, D.C., October 1963), p. 19; and Current Population Reports, *Farm Population*, Census-ERS, Series P-27, No. 34, 1964 and No. 35, 1965.

Changes in rural population by size of place. From one census to the next, throughout the entire history of the United States, the rural population has grown less rapidly than the urban population. Thus, with one trivial exception in 1820, the percent of the population classified as rural in any census has been lower than the percent in the preceding census. This trend has persisted for over 170 years and is a most impressive demonstration of a highly pervasive

Table II-3.—POPULATION IN GROUPS OF PLACES CLASSIFIED ACCORDING TO SIZE, FOR THE CONTERMINOUS UNITED STATES: 1790 TO 1960

[For current and previous urban definitions and changes in definition of farm population between 1950 and 1960, see text]

Year	Population						Percent of total population					
	United States	Rural territory				Urban territory	United States	Rural territory				Urban territory
		Total	Places of 1,000 to 2,500	Places under 1,000	Other rural			Total	Places of 1,000 to 2,500	Places under 1,000	Other rural	
Current urban definition:												
1960	178,464,236	53,765,214	6,440,164	3,887,654	43,437,396	124,669,022	100.0	30.1	3.6	2.2	24.3	69.9
1950	150,697,361	54,229,675	6,473,315	4,031,148	43,725,212	96,467,686	100.0	36.0	4.3	2.7	29.0	64.0
Previous urban definition:												
1960	178,464,236	65,932,295	5,558,962	4,025,894	56,347,439	112,531,941	100.0	36.9	3.1	2.3	31.6	63.1
1950	150,697,361	60,948,298	5,382,637	4,129,049	51,436,612	89,749,063	100.0	40.4	3.6	2.7	34.1	59.6
1940	131,669,275	57,245,573	5,026,834	4,315,843	47,902,896	74,423,702	100.0	43.5	3.8	3.3	36.4	56.5
1930	122,775,046	53,820,223	4,820,707	4,362,746	44,636,770	68,954,823	100.0	43.8	3.9	3.6	36.4	56.2
1920	105,710,620	51,552,647	4,712,007	4,254,968	42,585,672	54,157,973	100.0	48.8	4.5	4.0	40.3	51.2
1910	91,972,266	49,973,134	4,234,406	3,930,222	41,808,706	41,998,932	100.0	54.3	4.6	4.3	45.5	45.7
1900	75,994,575	45,834,654	[1]3,298,054	3,003,479	39,533,121	30,159,921	100.0	60.3	4.3	4.0	52.0	39.7
1890	62,947,714	40,841,449	2,508,642	2,249,332	36,083,475	22,106,265	100.0	64.9	4,0	3,6	57,3	35.1
1880	50,155,783	36,026,048	(2)	(2)	(2)	14,129,735	100.0	71.8	(2)	(2)	(2)	28.2
1870	38,558,371	28,656,010	(2)	(2)	(2)	9,902,361	100.0	74.3	(2)	(2)	(2)	25.7
1860	31,443,321	25,226,803	(2)	(2)	(2)	6,216,518	100.0	80.2	(2)	(2)	(2)	19.8
1850	23,191,876	19,648,160	(2)	(2)	(2)	3,543,716	100.0	84.7	(2)	(2)	(2)	15.3
1840	17,069,453	15,224,398	(2)	(2)	(2)	1,845,055	100.0	89.2	(2)	(2)	(2)	10.8
1830	12,866,020	11,738,773	(2)	(2)	(2)	1,127,247	100.0	91.2	(2)	(2)	(2)	8.8
1820	9,638,453	8,945,198	(2)	(2)	(2)	693,255	100.0	92.8	(2)	(2)	(2)	7.2
1810	7,239,881	6,714,422	(2)	(2)	(2)	525,459	100.0	92.7	(2)	(2)	(2)	7.3
1800	5,308,483	4,986,112	(2)	(2)	(2)	322,371	100.0	93.9	(2)	(2)	(2)	6.1
1790	3,929,214	3,727,559	(2)	(2)	(2)	201,655	100.0	94.9	(2)	(2)	(2)	5.1

[1] Figures revised since publication of Vol. I, 1940.

[2] Not reported separately.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 8.

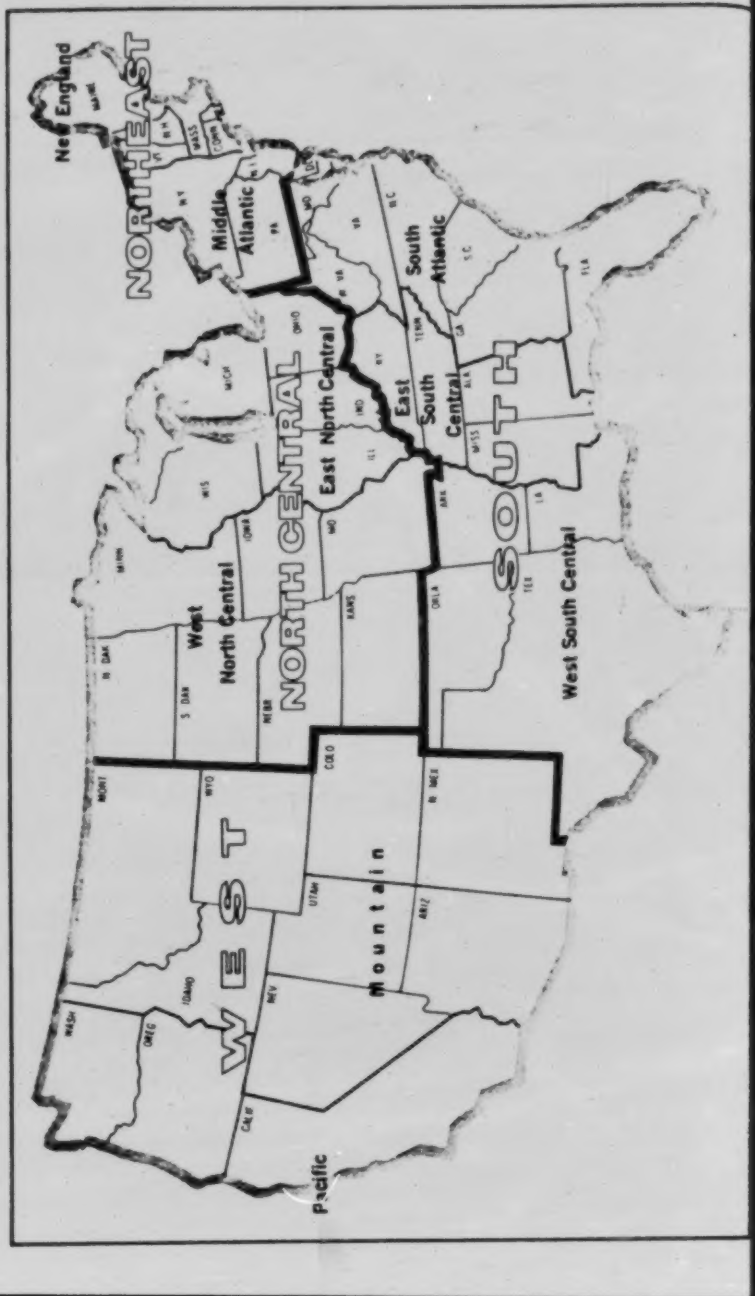
demographic transformation. The rural population, however, is not a geographically homogeneous body. Some live in villages, hamlets, and settlements of different sizes and some, both farm and nonfarm, in open country. Statistics on the distribution of the rural population by size of place, which go back only to 1890, show that there are real differences in the growth trends of different segments of the rural population.

Disregarding the distortions introduced by definitional changes, it is clear that the rural population living in places of 1,000 to 2,500 inhabitants has grown far more rapidly between 1890 and 1960 than has the rural population living in smaller places or in open country. The population in places of 1,000 to 2,500 has never been very large. It rose from 2.5 million in 1890 to 6.4 million in 1960, or about 2½ times. The population in places of under 1,000 was only 1.7 times as great in 1960 as in 1890, and the open-country rural population was only 1.2 times as great in 1960 as in 1890.

Despite the relatively rapid growth rate of that part of the rural population in places of 1,000 to 2,500, it has not kept pace with the growth of the total population of the country. In 1890, about 4.0 percent of our population lived in rural places of this size, and in 1960 this portion of the population had dropped to 3.6 percent. Clearly, the growth rates of the other less rapidly growing segments of the rural population lagged even farther behind the rate of growth of the total population. The rural population in places of under 1,000 inhabitants comprised 3.6 percent of the national population in 1890, and only 2.2 percent in 1960, despite a 70-percent increase in numbers during this period. The open-country rural population, which was 57.3 percent of the Nation's total population in 1890, fell to only 24.3 percent by 1960.

These facts justify the following conclusions. First, between 80 and 90 percent of the rural population lived outside of places on farms or in nonfarm residential dwellings. This is the open-country component of the rural population which is called "other rural territory" in Census reports. Second, the growth rate of the open-country component is lower than the growth rate of the rural population in places of under 1,000 inhabitants, which in turn is lower than the growth rate of the rural population in places of 1,000 to 2,500 inhabitants. Information on the distribution of the population by urban and rural residence, and of the rural population by size of place, is shown in table II–3.

It must be conceded that this evaluation of growth trends in the rural population by size of place is influenced by the definitional changes introduced in 1950 and 1960. It is possible to trace the growth trends from 1890 to 1950 without the distortions of the new definitions, because the 1950 data were tabulated both on the old basis and the new. Here too the growth rates of the three segments of the rural population fall into the same pattern, that is places of 1,000 to 2,500, followed by places of under 1,000, followed by open country. The differences among


NORTHEAST
New England
MAINE
VT
N H
MASS
CONN
R I
N Y
N J
Middle Atlantic
PA
DEL
MD
W VA
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N C
South Atlantic
S C
GA
FLA
SOUTH
East South Central
KY
TENN
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ARK
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OKLA
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West South Central
NORTH CENTRAL
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IDAHO
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WASH
OREG
CALIF

Figure II-1.—Regions and Geographic Divisions of the Conterminous United States: 1960

the rates are not as wide, but they are still there. On the other hand, the changes in definition resulted in a reduction in the growth rates of the open-country rural population and of the population in places of under 1,000, while augmenting the growth rate of the rural population in places of 1,000 to 2,500. This effect is readily detected by inspection of the figures for 1960 which were tabulated on the same basis as those for 1950 and also on the basis of the new 1960 definitions. The "other rural territory" or open-country component had an increase of 12.6 million between 1950 and 1960 according to figures from both censuses based on the 1950 definition, but a decrease of 0.4 million according to figures for 1960 based on the 1960 definition, and figures for 1950 based on the 1950 definition.

Although the statistical series presented may be deficient in some respects, they do portray the decline of a predominantly rural society and the rise of a predominantly urban one. The farm population has fallen to less than 8 percent; the number living in small towns and villages has dropped to less than 6 percent; an additional 16 percent resides in "other rural territory"; many of the latter live in suburbs and other unincorporated built-up areas and, thus, spuriously inflate the size of the already small American rural population.

Number and distribution of the rural population by farm and nonfarm residence

Fewer than one-third of the people of the conterminous United States were living in rural areas in 1960. The geographic distribution of the rural population among the regions was unequal, with heavy concentrations in the South and North Central Regions and relatively small numbers in the Northeast and the West. About 3 out of 4 rural residents were found in the South and North Central Regions; about one-sixth, in the Northeast; and just over one-tenth in the West. A large fraction of the rural population was found in only two divisions, the South Atlantic with 20.7 percent, and the East North Central with 18.2 percent. Four divisions, the Middle Atlantic, the West South Central, the East South Central, and the West North Central, each accounted for 10 to 12 percent, and the New England, Mountain, and Pacific Divisions each had only 4 to 7 percent of the total. Nationally, the rural population was predominantly rural-nonfarm as only 1 out of 4 rural residents lived on a farm. See figure II–1 which shows the United States according to regions and geographic divisions.

The rural-farm population. The rural-farm population in 1960 numbered 13,431,791, or 7.5 percent of the total population of the United States. Figure II–2 portrays the distribution of this population by county. The heavy concentration of farm population throughout the South and North Central States is apparent. Comparatively few rural-farm people reside in the Northeast or in the great stretches of territory in the West.

The size of the rural population of each State in 1960 is presented in figure II–3. This chart, arranged according to the size of the rural-farm population,

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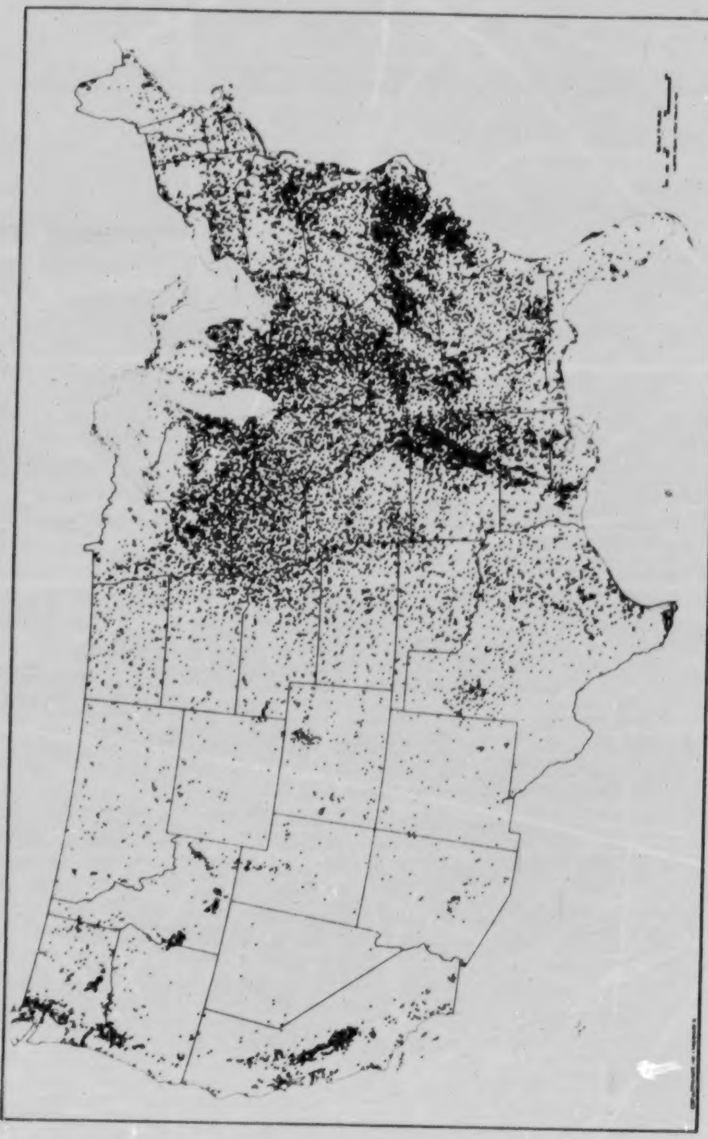
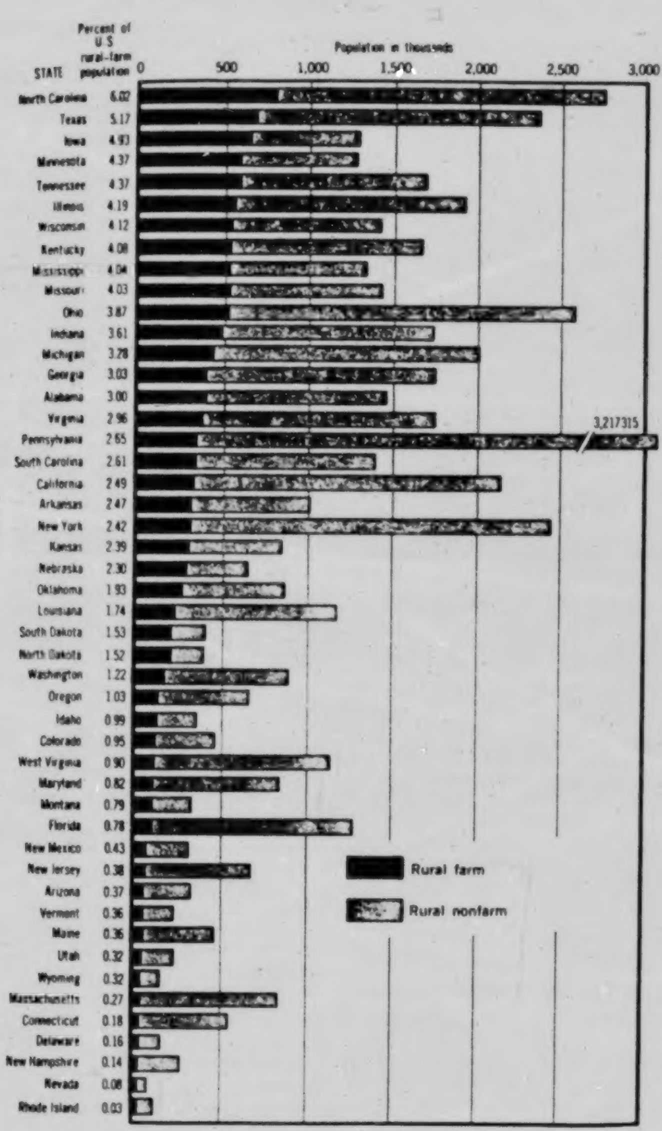
Figure II-2.—Rural-Farm Population of the Conterminous United States: 1960

[Each dot represents 1,000 rural-farm population]



Source: 1960 Census of Population, Vol. I, *Characteristics of the Population, State Reports*, table 93.

Figure II-3.—RURAL-FARM AND RURAL-NONFARM POPULATIONS, BY STATES: 1960



Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 107.

shows more farm population in North Carolina than in any other State. Approximately 6 percent of the rural-farm population of the conterminous United States resides in this State. Texas, Iowa, Minnesota, and Tennessee, each with more than 4 percent of the rural-farm population, follow North Carolina in size of farm population. These five States account for slightly less than one-fourth of the rural-farm population of the Nation. On the other extreme, each of 18 States accounts for less than 1 percent of the national rural-farm population.

Rural-farm residents in 1960 comprised 7.5 percent of the total population. In the South and North Central Regions, which together had three-fourths of all the rural population, the percentage of rural-farm residents was well above the national average, with 10.8 and 10.4 percent, respectively. The other two regions, which shared the remaining one-fourth of the country's rural population, had relatively small rural-farm populations, about 4.4 percent of the total population in the West, and 2.0 percent in the Northeast.

Among the geographic divisions, two stand out as having relatively high proportions of rural-farm population, the West North Central Division, with 18.4 percent of its population classified as rural-farm, and the East South Central Division, with 17.3 percent. Three other divisions—the West South Central, South Atlantic, and Mountain—contain larger than average proportions of rural-farm population. The remaining divisions, all below the national average, are the East North Central, Pacific, Middle Atlantic, and New England. (See table II-4.)

Table II-4.—RURAL POPULATION, BY REGIONS AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Rural population						Percent of total population		
	Total	Rural nonfarm	Rural farm	Percent			Total	Rural nonfarm	Rural farm
				Total	Rural nonfarm	Rural farm			
United States..	53,752,677	40,320,886	13,431,791	100.0	100.0	100.0	30.1	22.6	7.5
Regions:									
Northeast..........	8,838,684	7,926,261	912,423	16.4	19.7	6.8	19.7	17.7	2.0
North Central.....	16,138,272	10,745,701	5,392,571	30.0	26.7	40.1	31.2	20.8	10.4
South..............	22,797,630	16,876,833	5,920,797	42.4	41.9	44.0	41.5	30.7	10.8
West................	5,978,091	4,772,091	1,206,000	11.1	11.8	9.0	21.9	17.5	4.4
Northeast:									
New England........	2,477,572	2,297,525	180,047	4.6	5.7	1.3	23.6	21.9	1.7
Middle Atlantic....	6,361,112	5,628,736	732,376	11.8	14.0	5.4	18.6	16.5	2.1
North Central:									
East North Central.	9,789,882	7,227,249	2,562,633	18.2	17.9	19.0	27.0	19.9	7.1
West North Central.	6,348,390	3,518,452	2,829,938	11.8	8.7	21.0	41.3	22.9	18.4
South:									
South Atlantic.....	11,107,696	8,785,374	2,322,322	20.6	21.8	17.2	42.7	33.8	8.9
East South Central.	6,216,109	4,135,848	2,080,261	11.5	10.2	15.4	51.6	34.3	17.3
West South Central.	5,473,825	3,955,611	1,518,214	10.1	9.8	11.3	32.3	23.3	9.0
West:									
Mountain...........	2,255,513	1,685,324	570,189	4.1	4.1	4.2	32.9	24.6	8.3
Pacific............	3,722,578	3,086,767	635,811	6.9	7.7	4.7	18.3	15.2	3.1

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 107 (adjusted to exclude data for Alaska and Hawaii).

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The numerical concentration of the rural-farm population in the South and North Central Regions is clearly seen in table II–4. The rural-farm population of the South was approximately 6 million and in the North Central Region, 5.4 million. These two regions account for 84.2 percent of the Nation's rural-farm population. The remaining one-sixth of the rural-farm population includes 1.2 million in the West and less than 1 million in the Northeast.

Four of the nine geographic divisions contain over 2 million rural-farm population each. These are the West North Central, East North Central, South Atlantic, and East South Central. Together, these four divisions account for nearly three-fourths of all rural-farm residents. Relatively small numbers of rural-farm persons are found in the remaining divisions.

The rural-nonfarm population. The rural-nonfarm population in 1960 numbered 40,320,886, and accounted for 22.6 percent of the total population of the conterminous United States. It was often concentrated near large urban centers, but may also be dispersed throughout the countryside, especially in the South and Central States. (See figure II–4.)

The rural-nonfarm population of Pennsylvania is larger than that of any other State. Ranking next in size of rural-nonfarm population are New York, Ohio, North Carolina, California, Texas, and Michigan. The rural-nonfarm population is generally much larger than the rural-farm population and in numerous States is more than 5 times as large (fig. II–3).

Over the country as a whole, just over one-fifth of the 1960 population comprised rural-nonfarm residents. There was, however, considerable regional variation in the proportion of rural-nonfarm population. In the Northeast and the West about 180 of every 1,000 inhabitants were rural-nonfarm, as compared with 208 in the North Central Region and 307 in the South. Thus, in the South, the proportion of rural-nonfarm population was about 70 percent higher than in the Northeast and the West.

Two divisions of the South—the South Atlantic and East South Central—had more than one-third of their populations classified as rural-nonfarm in 1960. Three additional divisions—the Mountain, West South Central, and West North Central—had proportions of rural-nonfarm population larger than the national average. The remaining divisions, all below the national average in percentage of rural-nonfarm population, were, in descending order, the New England, East North Central, Middle Atlantic, and Pacific.

Numerically, the rural-nonfarm population is concentrated in the South and North Central Region. The South, with 16.8 million, and the North Central Region, with 10.7 million, together accounted for slightly more than two-thirds of the total rural-nonfarm population of the conterminous United States. The Northeast accounted for approximately one-fifth of the total and the West, the remainder—about one-eighth of the total.

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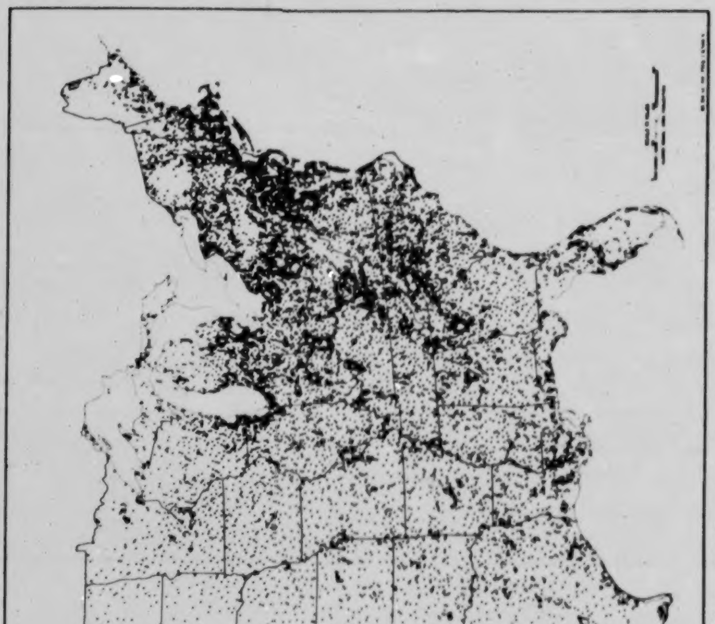
Figure II-4.—Rural-Nonfarm Population of the Conterminous United States: 1960

[Each dot represents 3,000 rural-nonfarm population]



Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, State Reports, table 91.

Each of three divisions contained more than 5 million rural-nonfarm persons: the South Atlantic, with 8.7 million; the East North Central, with 7.2 million; and the Middle Atlantic, with 5.6 million. Together these divisions accounted for more than half of the total rural-nonfarm population of the Nation. More than 3 million rural-nonfarm persons resided in each of these four additional divisions: the East South Central, West South Central, West North Central, and Pacific. The rural-nonfarm population is least numerous in the New England and Mountain Divisions.

The rural nonwhite population

Approximately one-tenth of the rural population of the conterminous United States in 1960 was nonwhite. While the number of rural nonwhites living on farms was much smaller than the number classed as rural-nonfarm, the percentage of nonwhites was higher in the rural-farm population, 11.8 as compared with 9.7 percent. Approximately 87 percent of all rural nonwhites resided in the South, nearly 46 percent in the South Atlantic Division.

Negroes, of course, account for a large proportion of all nonwhites in the Nation, and an almost equally large proportion of rural nonwhites. Of the 5½ million rural nonwhites in the United States in 1960, approximately 5 million, or 92 percent, were Negro. Approximately 367,000, or 6.7 percent, were Indian; about 44,000, or 0.8 percent, Japanese; 21,000, or 0.4 percent, Filipino; and 8,000, or 0.2 percent, Chinese. The remainder of about 13,000 (0.2 percent) was made up of people of various other nonwhite races.

The concentration of rural Negroes in the South, where approximately 93 percent of them reside, is well known. Less than 6 percent of all rural Negroes live in the two regions of the North, and only 1.5 percent are found in the West. Other nonwhite races residing in rural areas, however, are concentrated in the West. Approximately 54 percent of all rural Indians, 73 percent of all rural Japanese, 51 percent of all rural Chinese, and 80 percent of all rural Filipinos are located in the West. A summary of the number and distribution of rural nonwhites by region is found in table II-5.

The rural-farm nonwhite population. The rural-farm nonwhite population in 1960 numbered 1,583,069, or 11.8 percent of the rural-farm total population of the conterminous United States. As indicated in table II-6, rural-farm nonwhites in the South represented approximately 94 percent of all rural-farm nonwhite persons in the Nation, and one-fourth of all rural-farm persons in the South. In the West they numbered approximately 63,000, or 4.0 percent of all rural-farm nonwhites. Rural-farm nonwhites in the two regions of the North numbered only about 38,000, the two regions together accounting for only 2.4 percent of all rural-farm nonwhites.

The heavy concentration of rural-farm nonwhites in the South Atlantic and East South Central Divisions is evident from table II-6. There were about

722,000 in the South Atlantic Division and 518,000 in the East South Central, accounting for 46 percent and 33 percent, respectively, of the rural-farm nonwhite residents in the United States. Except for the West South Central Division, which had 240,000 rural-farm nonwhites and 15.2 percent of all rural-farm residents in the United States, no other division had more than 37,000.

Table II-5.—NONWHITE POPULATION BY RACE, RURAL RESIDENCE, AND REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region	Total nonwhite	Negro	Indian	Japanese	Chinese	Filipino	All other
NUMBER							
United States, total	20,009,280	18,860,117	508,675	260,059	198,958	106,426	75,045
Northeast	3,155,352	3,028,499	26,356	17,962	53,654	10,650	18,231
North Central	3,616,522	3,446,037	98,631	29,318	18,413	8,600	15,523
South	11,496,477	11,311,607	127,568	16,245	16,839	10,720	13,498
West	1,740,929	1,073,974	256,120	196,534	110,052	76,456	27,793
United States, rural	5,512,257	5,058,853	366,953	43,813	8,511	20,671	13,456
Northeast	151,250	132,111	11,196	3,389	1,493	852	2,211
North Central	220,460	148,778	64,328	3,397	770	867	2,320
South	4,808,545	4,703,660	91,591	5,167	1,880	2,432	3,815
West	332,002	74,306	199,840	31,860	4,368	16,520	5,110
PERCENT DISTRIBUTION BY RACE							
United States, total	100.0	94.2	2.5	1.3	1.0	0.5	0.4
Northeast	100.0	96.0	0.8	0.6	1.7	0.3	0.6
North Central	100.0	95.3	2.7	0.8	0.5	0.2	0.4
South	100.0	98.4	1.1	0.1	0.1	0.1	0.1
West	100.0	61.7	14.7	11.3	6.3	4.4	1.6
United States, rural	100.0	91.8	6.7	0.8	0.2	0.4	0.2
Northeast	100.0	87.3	7.4	2.2	1.0	0.6	1.5
North Central	100.0	67.5	29.2	1.5	0.4	0.4	1.1
South	100.0	97.8	1.9	0.1	(Z)	0.1	0.1
West	100.0	22.4	60.2	9.6	1.3	5.0	1.5
PERCENT DISTRIBUTION BY REGION							
United States, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Northeast	15.8	16.1	5.2	6.9	27.0	10.0	24.3
North Central	18.1	18.2	19.4	11.3	9.2	8.1	20.7
South	57.4	60.0	25.1	6.2	8.5	10.1	18.0
West	8.7	5.7	50.3	75.6	55.3	71.8	37.0
United States, rural	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Northeast	2.7	2.6	3.1	7.7	17.6	4.1	16.4
North Central	4.0	2.9	17.5	7.8	9.0	4.2	17.2
South	87.3	93.0	25.0	11.8	22.1	11.8	28.4
West	6.0	1.5	54.4	72.7	51.3	79.9	38.0

Z Less than 0.1 percent.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 51 (adjusted to exclude data for Alaska and Hawaii).

The rural-nonfarm nonwhite population. The rural-nonfarm nonwhite population in 1960 numbered 3,925,230, or 9.7 percent of the total in the conterminous United States. While rural-nonfarm nonwhites show patterns of concentration similar to those of the rural-farm nonwhites, considerably more dispersion throughout the Nation is evident (table II-6). Approximately 3.3 million, or 84.6 percent, of all rural-nonfarm nonwhites were residents of the South in

1960, about 7 percent in the West, about 5 percent in the North Central Region, and less than 4 percent in the Northeast.

Table II-6.—Total and Rural Populations by Color, by Regions and Divisions, for the Conterminous United States: 1960

Region, division, and color	Total population	Rural population		
		Total	Rural farm	Rural nonfarm
United States:				
White	158,460,691	48,244,378	11,848,722	36,395,656
Nonwhite	20,006,041	5,508,299	1,583,069	3,925,230
Percent nonwhite	11.2	10.2	11.8	9.7
Northeast:				
White	41,527,961	8,688,328	905,713	7,782,615
Nonwhite	3,153,761	150,356	6,710	143,646
Percent nonwhite	7.1	1.7	0.7	1.8
North Central:				
White	48,005,880	15,916,631	5,361,129	10,555,502
Nonwhite	3,617,893	221,641	31,442	190,199
Percent nonwhite	7.0	1.4	0.6	1.8
South:				
White	43,469,348	17,993,118	4,439,238	13,553,880
Nonwhite	11,494,122	4,804,512	1,481,559	3,322,953
Percent nonwhite	20.9	21.1	25.0	19.7
West:				
White	25,457,522	5,646,301	1,142,642	4,503,659
Nonwhite	1,740,265	331,790	63,358	268,432
Percent nonwhite	6.4	5.6	5.3	5.6
New England:				
White	10,243,978	2,454,773	179,517	2,275,256
Nonwhite	266,128	22,799	530	22,269
Percent nonwhite	2.5	0.9	0.3	1.0
Middle Atlantic:				
White	31,283,963	6,233,555	726,196	5,507,359
Nonwhite	2,887,633	127,557	6,180	121,377
Percent nonwhite	8.5	2.0	0.8	2.2
East North Central:				
White	33,257,264	9,670,026	2,553,314	7,116,712
Nonwhite	2,971,426	119,856	9,319	110,537
Percent nonwhite	8.2	1.2	0.4	1.5
West North Central:				
White	14,748,616	6,246,605	2,807,815	3,438,790
Nonwhite	646,467	101,785	22,123	79,662
Percent nonwhite	4.2	1.6	0.8	2.3
South Atlantic:				
White	20,036,641	8,582,579	1,599,939	6,982,640
Nonwhite	5,923,617	2,525,117	722,383	1,802,734
Percent nonwhite	22.8	22.7	31.1	20.5
East South Central:				
White	9,339,136	4,935,144	1,561,454	3,373,690
Nonwhite	2,710,992	1,280,965	518,807	762,158
Percent nonwhite	22.5	20.6	24.9	18.4
West South Central:				
White	14,093,573	4,475,395	1,277,845	3,197,550
Nonwhite	2,859,513	998,430	240,369	758,061
Percent nonwhite	16.9	18.2	15.8	19.2
Mountain:				
White	6,514,063	2,068,013	532,966	1,535,067
Nonwhite	340,9[illegible]	187,500	37,243	150,257
Percent nonwhite	5.0	8.3	6.5	8.9
Pacific:				
White	18,943,479	3,578,288	609,696	2,968,592
Nonwhite	1,399,270	144,290	26,115	118,175
Percent nonwhite	6.9	3.9	4.1	3.8

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 107 (adjusted to exclude data for Alaska and Hawaii).

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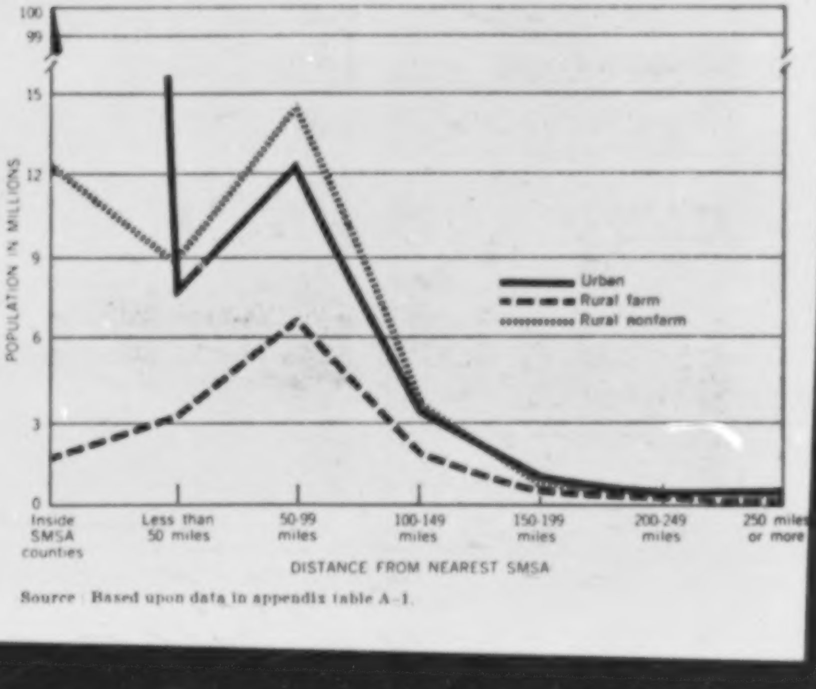
As shown in table II-6, the largest numbers and proportions of rural-nonfarm nonwhites are located in the three Southern divisions of the Nation, the South Atlantic Division alone accounting for approximately 46 percent of the national total. Except for the New England Division, in which only 22,000 rural-nonfarm nonwhites reside, each remaining division had between 110,000 and 150,000, or between 2.0 and 3.8 percent, of all rural-nonfarm nonwhites.

Population dispersal around large urban centers

A very large part of the American population, whether urban or rural, farm or nonfarm, lives in or within a relatively short distance of large urban centers. For purposes of this study every county in the United States has been classified according to its distance from the nearest standard metropolitan statistical area (SMSA), in terms of 50-mile bands of territory centering on each SMSA. This has been described in chapter I. The 1960 Census figures on the number of inhabitants in each county, by color, classified as urban, rural-nonfarm, and rural-farm, have been cumulated for the counties in each set of these distance bands, and percentages of the population in the different color-residence categories were computed. The end-product is a body of data on the population by color and residence in each of six classes according to distance of the county of residence from the nearest SMSA. A summary of these data is depicted in figure II-5.

Figure II-5.—Population By Rural and Urban Residence, and Distance From Nearest Standard Metropolitan Statistical Area, For the Conterminous United States: 1960



Source: Based upon data in appendix table A-1.

Nearly 114 million people, or slightly less than two-thirds of the population of the conterminous United States, live in SMSA's. Another 20 million live within 50 miles of an SMSA, 33 million more within the next 50-mile band, 8 million in the band from 100 to 150 miles, and about 4 million in the last three bands. In all, 93 percent of the American people live within 100 miles of an SMSA. This includes 96 percent of the urban population, 88 percent of the rural-nonfarm, and 82 percent of the rural-farm.

The largest number of urban residents is found in SMSA's rather than in any outlying 50-mile band of territory. The largest concentrations of both rural-farm and rural-nonfarm residents are found in the band 50 to 99 miles from the SMSA's. In this band are found over 14 million rural-nonfarm inhabitants and 6 million rural-farm. In areas more distant than 100 miles from an SMSA, the total population is about 12½ million, about one-fifth of which is rural-farm, with the remaining four-fifths about equally divided between urban and rural-nonfarm residents. Thus, beyond the 100-mile limit, the rural-nonfarm population is about twice as large as the rural-farm population. (See appendix table A–1.)

The rural-farm population within 100 miles of the Nation's SMSA's is dispersed in a curiously regular pattern. More than 1.6 million, or 12.4 percent, live within SMSA's. About double that number live within 50 miles of an SMSA, and the number doubles again in the next 50-mile band. Beyond the 100-mile band, the rural-farm population declines sharply. Only 1.4 percent live 250 miles or more from SMSA's. (See appendix table A–1.)

The distribution of the rural-farm population by distance from the nearest SMSA is different for whites and nonwhites in the different geographic regions. Outside the South, nonwhites comprise a trivial proportion of the rural-farm population, about 1.3 percent. In general there is a tendency for the rural nonwhite population to live in or closer to SMSA's in the Northeast than elsewhere, but this tendency is also characteristic of the rural-farm white population in this region and reflects primarily the high degree of metropolitanization of the region. In the North Central Region neither the white nor the nonwhite rural-farm population is found to a great extent in SMSA's, but about 80 percent of each group resides in the zone extending up to 150 miles from an SMSA. In this region the rural-farm white population tends to live closer to the SMSA's than does the nonwhite. In the West, almost a fifth of the rural-farm population—both white and nonwhite—is found in SMSA's, almost none in the first 50-mile zone, and about half of the white and one-third of the nonwhites in the zones from 50 to 149 miles. In the South, a large concentration of rural-farm white and nonwhite populations is found in the band from 50 to 99 miles from an SMSA. About 64 percent of the rural-farm nonwhite population and 58 percent of the white rural-farm population live in this zone. Less than one-tenth of the rural-farm population of the South is over 100 miles from an SMSA.

The rural-nonfarm population is also heavily concentrated near large centers. Approximately 12 million, or about 30 percent of all rural-nonfarm persons, reside in SMSA counties; an additional 8.6 million, or about 22 percent, live within 50 miles of the nearest SMSA; and about 14.3 million more, or nearly 36 percent of the total rural-nonfarm population, reside between 50 and 99 miles from the nearest SMSA.

The composition of the population by residence and color in the several distance bands is summarized in table II–7. The population in SMSA's is largely urban, about 88 percent, and all but 1½ percent of the rural population is rural-nonfarm. Outside the SMSA counties, the proportion of the population in a distance band which is urban is relatively stable ranging from 37 percent in the 50-to-99-mile band to a maximum of 42 percent in the 150-to-199-mile band. Similar regularities are found for the rural-farm and rural-nonfarm populations outside of SMSA counties. The rural-farm population ranges from 16 percent of the total population in the under-50-mile band to 21 percent in the 100-to-149-mile band, and the range of variation in the proportion of the population which is rural-nonfarm runs from 40 percent in the 100-to-149-mile band to 45 percent in the under-50-mile band.

Table II–7.—Percent Distribution of the Population by Rural and Urban Residence and Color, by Distance from Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960

Residence and color	Total	Inside SMSA counties	Distance from nearest SMSA[1]				
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 miles or more
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Rural farm	7.5	1.5	16.0	18.9	20.8	16.8	20.4
White	6.6	1.4	14.4	15.9	18.9	16.4	19.3
Nonwhite	0.9	0.1	1.6	3.0	1.9	0.4	1.1
Rural nonfarm	22.6	10.7	44.5	43.9	40.0	41.0	40.0
White	20.4	10.1	39.8	38.2	36.5	39.4	35.5
Nonwhite	2.2	0.6	4.7	5.7	3.5	1.6	4.5
Urban	69.9	87.8	39.5	37.2	39.2	42.2	39.6
White	61.8	77.2	35.9	32.6	36.9	41.4	38.8
Nonwhite	8.1	10.6	3.6	4.6	2.3	0.8	0.8

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Appendix table A–1.

The nonwhite population reaches its greatest relative size in the band lying from 50 to 99 miles from an SMSA. In this band over 13 percent of the population is nonwhite. Within SMSA's nonwhites comprise 11 percent of the population, and in the under-50-mile band, about 10 percent. The white population dominates in all bands, ranging from 97 percent of the population of the 150-to-199-mile band down to about 87 percent in the 50-to-99-mile band.

Regional differences in residence patterns of whites and nonwhites with respect to distance are summarized in table II–8. In general, the rural-farm population of the Northeast and the South resides in or in closer proximity to large urban centers than does that of the North Central or West Regions. Nearly two-thirds of the white rural-farm population in the Northeast either resides in or within 50 miles of an SMSA. Comparable proportions for the North Central, South, and West Regions are 38, 33, and 24 percent, respectively. Nearly three-fifths of the rural-farm white population of the South, however, reside between 50 and 99 miles from an SMSA, compared with 39 percent in the North Central Region, 26 percent in the Northeast, and 25 percent in the West. The percent of the rural-farm white population residing 100 miles or more from an SMSA is 51 percent in the West, 23 percent in the North Central Region, 10 percent in the Northeast, and 9 percent in the South.

Table II-8.—PERCENT DISTRIBUTION OF THE RURAL POPULATION BY COLOR, DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, AND REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region, residence, and color	Total	Inside SMSA counties	Distance from nearest SMSA[1]					
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 to 249 miles	250 miles or more
RURAL FARM								
Northeast:								
White	100.0	37.5	27.0	25.6	5.9	2.8	-	1.2
Nonwhite	100.0	48.7	33.2	13.1	3.1	0.5	-	1.4
North Central:								
White	100.0	10.9	27.1	38.9	16.1	3.6	1.4	2.0
Nonwhite	100.0	5.6	16.6	25.2	36.6	2.1	4.4	9.5
South:								
White	100.0	8.6	24.5	58.1	8.6	0.2	-	-
Nonwhite	100.0	5.9	21.1	63.9	9.1	(Z)	-	-
West:								
White	100.0	22.6	1.8	25.0	22.9	13.9	8.2	5.6
Nonwhite	100.0	24.6	1.7	16.3	19.0	12.6	17.4	8.4
RURAL NONFARM								
Northeast:								
White	100.0	53.0	20.4	20.9	3.0	2.0	-	0.7
Nonwhite	100.0	56.4	23.2	16.7	1.4	1.4	-	0.9
North Central:								
White	100.0	27.0	28.4	29.3	10.6	2.6	0.9	1.2
Nonwhite	100.0	25.7	18.3	24.9	15.1	3.7	4.5	7.8
South:								
White	100.0	21.9	22.4	49.6	6.0	0.1	-	-
Nonwhite	100.0	15.6	25.2	53.4	5.8	(Z)	-	-
West:								
White	100.0	35.1	3.6	23.5	19.0	10.6	5.8	2.4
Nonwhite	100.0	28.8	1.9	14.7	23.2	10.4	13.5	7.5

- Represents zero.

Z Less than 0.1 percent.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Appendix table A-2.

Regional differences in the rural-nonfarm population, with respect to distance from large centers, are akin to those described for the rural-farm population. Due to the suburban character of one segment of the rural-nonfarm population, a relatively high proportion of all rural-nonfarm residents lives in SMSA counties; for both whites and nonwhites in the Northeast, this proportion is well over half.

Nearly 80 percent of the rural-nonfarm nonwhite population in the Northeast resides either in SMSA's or within 50 miles of one. Comparable proportions for the other three regions, in order, are North Central, 44 percent; South, 41 percent; and West, 31 percent. One-half of all rural-nonfarm whites in the South reside between 50 and 99 miles from an SMSA, while in the North Central Region the percentage is 29; in the West, 24; and in the Northeast, 21. The proportion of the rural-nonfarm white population residing 100 miles or more from an SMSA ranges from a high of 38 percent in the West to less than 6 percent in the Northeast.

Rural-nonfarm nonwhites, like rural-farm nonwhites, generally are more distant from an SMSA than are whites only in the North Central and West Regions. In the South, well over half of all rural-nonfarm nonwhites reside from 50 to 99 miles from the nearest SMSA. In the SMSA's of the South are found about 16 percent of the rural-nonfarm nonwhite population of the region, as compared with 22 percent of the whites.

Summary

Less than one-third of the population of the conterminous United States in 1960 was classified as rural. Within the rural population, there were approximately three rural-nonfarm residents for each rural-farm resident. The rural-nonfarm category is residentially and occupationally heterogeneous, and a large portion of it is inappropriately associated with the term "rural."

The rural-farm population in 1960 was heavily concentrated in the North Central Region and the South, which together accounted for 84 percent of all rural-farm residents. In each of these regions the rural-nonfarm population comprised about one-tenth of the total population. The two geographic divisions of the North Central Region each had almost a fifth of the population living on farms in rural territory. There was no other geographic division which had as much as one-tenth of its population classed as rural-farm.

The rural-nonfarm population in 1960 was also heavily concentrated in the same two regions which contained the bulk of the rural-farm population, but the concentration was not quite so heavy. About 70 percent of all rural-nonfarm residents were in these two regions. No geographic division had less than 15 percent or more than 34 percent of its population consisting of rural-nonfarm residents.

Approximately 5.5 million people, or 10 percent of the rural population of the conterminous United States in 1960, were nonwhite. Of this number, about 92 percent were Negro, about 7 percent Indian, and the remainder was comprised of Japanese, Chinese, Filipino, and other nonwhite groups. The rural-farm population contained slightly less than 1.6 million nonwhites in 1960, with 94 percent residing in the South. Rural-farm nonwhites numbered more than 20,000 in each of three divisions outside of the South, namely, the Mountain, Pacific, and West North Central Divisions. While the rural-nonfarm population contained approximately 4 million nonwhites, the proportion of nonwhites in this category was less than in the rural-farm population. Rural-nonfarm nonwhites also were highly concentrated in the South, but to a lesser degree than rural-farm nonwhites.

A very large proportion of the American population in 1960 resided within a short distance of a standard metropolitan statistical area. Over one-third of all rural-farm residents were within an SMSA or within 50 miles of one. Less than half (46 percent) of all rural-farm people lived between 50 and 99 miles of an SMSA, and less than one-fifth were 100 or more miles away from the nearest SMSA. The rural-nonfarm population, of course, was even less removed from large centers than the rural-farm population. More than half of the rural-nonfarm population resided either in an SMSA or within 50 miles of it. An additional one-third (36 percent) lived from 50 to 100 miles from the nearest SMSA. Only one-eighth of all rural-nonfarm persons resided 100 miles or more from an SMSA.

In general, the rural-farm population of the West resides at the greatest distances from a large city, and that of the Northeast in closest proximity to a large city. A large proportion of the rural-farm population of the South, both white and nonwhite, resides between 50 and 99 miles from the nearest SMSA, relatively few are found in SMSA's or at distances of 100 miles or more.

All indications point to further declines in the number and percentage of the American population categorized as rural-farm. The nonfarm segment of the rural population, on the other hand, has increased rapidly and appears likely to continue to grow, subject, of course, to future changes in definition.

NOTES

[1] See chapter I for details concerning 1960 Census definitions of rural-farm and rural-nonfarm populations.

[2] For a more complete discussion, see Donald J. Bogue, *The Population of the United States* (Glencoe: The Free Press, 1959), chapter 2.

CHAPTER III

AGE AND SEX COMPOSITION OF THE RURAL POPULATION

Introduction

Age and sex are significant social as well as biological facts in all human populations. They are biological in that the individual is born either male or female, an event over which he has no control; he then enters the inexorable process of aging, over which little control can be exercised. From birth to eventual death, society generates a series of roles and norms considered appropriate to the various life cycle stages. While the appropriate and correct behavior expected may differ from one social group to another, no society can function effectively without such roles and norms. The roles and expected behavior of youth and adults, for instance, differ in important ways in all societies. There is considerable evidence that differences also exist between rural and urban groups within the same society.

The composition of a population by age and sex is determined by the cumulative influence of antecedent events, primarily births, deaths, and migration. The size of each age-sex cohort of a population is a function of the number and distribution by sex of persons born into that cohort, the mortality rates the cohort experiences year-by-year as it grows older, and the extent to which persons in the cohort move from one area to another. A population with a history of high birth rates and high death rates will tend to have a large proportion of young people, whereas one with the same high birth rates but low death rates will often have a smaller proportion of young people. The qualification implied by the word "often" reflects the fact that a changing pattern of death rates by age, even within the framework of a low overall death rate, has considerable influence over age composition. Also, there is considerable interaction between antecedent mortality and current fertility which affects the size of the cohort of women of childbearing age and hence the number of births. Migration, which is usually selective by age and sex, serves to remove people from some age-sex groups in one population and to add them to another population elsewhere. Underlying the contribution of these primary demographic variables is a thicket of social, economic, psychological, and institutional forces which influence demographic behavior differently at different times and set in motion demographic events whose consequences in terms of age-sex distribution will not be fully realized for many years afterward.[1]

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One purpose of this chapter is to describe the age and sex composition of the rural components of the American population in 1960, addressing attention to such questions as: What is the character of the age-sex structure of the rural-farm and rural-nonfarm residence groups of the United States? What variations exist among the regions and divisions of the Nation? To what extent do the residence groups exhibit distinguishable patterns with respect to age and sex? Are age and sex patterns for whites and nonwhites similar or dissimilar? And finally, what patterns of age and sex, especially in the rural components, are associated with distance from the nearest SMSA?

The age composition of the rural-farm and rural-nonfarm populations

Traditionally, the rural population in the United States and elsewhere has been characterized by higher birth rates than the urban population. Industrializa- into urban areas. Selective migration and high birth rates have been responsible produced currents of migration which have drawn surplus rural young adults into urban areas. Selective migration and high birth rates have been responsible to a large extent for the special age and sex structure of the population of rural areas. In essence, therefore, rural populations have usually been younger than urban populations, in that they had large proportions of children and small proportions of young adults while the reverse was true of urban populations.[2] While this simplified, generalized picture of age structure has been applicable in the past, was it still so in 1960? The isolation of rural areas has become a matter of conjecture; birth rate differentials have been narrowing; drastic changes have been taking place within all sectors of the economy, and the residence categories have been altered in significant ways in 1960. These reasons, among others, justify a careful examination of the age composition of the American rural population in 1960.

Median age, by color. The median age of the total population of the United States, including Alaska and Hawaii, was 29.5 years in 1960. The median age of females, 30.4 years, exceeded that of males by 1.9 years. The median age of the white population of the United States was 30.3 years as compared with only 23.5 years for the nonwhite population. Among whites, the median age of females was 1.9 years greater than that of males, and the comparable difference among nonwhites was 1.8 years.

For the United States, the urban population was the oldest (median age 30.3 years), the rural-farm population next (29.6 years), and the rural-nonfarm population was the youngest (26.8 years). The same pattern was true for both males and females. On the other hand, among whites the rural-farm population was the oldest, the urban population intermediate, and the rural-nonfarm population the youngest. This order held true for both sexes, except that white urban females had a median age greater by 0.1 year than did white rural-farm females. In the nonwhite population, urban nonwhites had the highest median age, rural-nonfarm nonwhites were next, and rural-farm nonwhites were the youngest. This order was true for both sexes. Nonwhites of all residence categories are markedly younger than whites.

Table III-1.—MEDIAN AGE OF POPULATION BY RESIDENCE, COLOR, AND SEX, FOR THE UNITED STATES: 1960

[Includes data for Alaska and Hawaii]

Residence	Median age by color and sex								
	Total			White			Nonwhite		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
United States.....	29.5	28.5	30.4	30.3	29.3	31.2	23.5	22.6	24.4
Rural farm............	29.6	29.2	30.0	31.7	31.4	31.9	17.4	17.2	17.6
Rural nonfarm.........	26.8	26.0	27.5	27.5	26.8	28.2	20.0	19.9	20.3
Urban.................	30.3	29.3	31.2	31.0	30.0	32.0	25.3	24.4	26.0

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 65.

Population profile by age, sex, and color. The relationships between the cohorts comprising a population may be graphically depicted in a special type of bar chart called a population pyramid. Horizontal bars with length proportional to the size of each cohort or to the percentage each cohort comprises of the total population depicted are placed one above the other in order of age. The resulting array of bars for most human populations assumes a pyramidal form and presents a "snapshot" of the population indicating the relative importance of each cohort. Age pyramids for the rural-farm, rural-nonfarm, and urban populations of the United States, by color, are shown in figure III-1. Rural-farm and rural-nonfarm age distributions, by sex and color, for the conterminous United States and regions are shown in appendix tables A-3 and A-4.

The differing outlines of the three pyramids in figure III-1 call attention to different patterns of age distribution in the three residence groups. The rural-farm population has a very large proportion of children and youths, a relatively small proportion of young adults, and a fairly large proportion of older adults. The urban population generally exhibits the reverse of this pattern. The contours of the rural-nonfarm population are intermediate.

Differences are notable in age structure between the white and nonwhite populations of each residence group. In all residence categories, there is a characteristically high ratio of nonwhite to white youths, and a characteristically low ratio of nonwhite to white adults. In both the rural-farm and rural-nonfarm populations, the proportions of nonwhite youths in each of the 5-year age-sex groups through age 24 either equal or greatly exceed those of the white population of the same age. In contrast, the proportion of the white population is the greater in both rural residence categories in each 5-year age-sex group beginning with age 25 and continuing throughout the lifespan. In the urban population, important

Figure III-1.—PERCENT DISTRIBUTION OF RURAL AND URBAN POPULATIONS, BY COLOR, SEX, AND AGE, FOR THE CONTERMINOUS UNITED STATES: 1960

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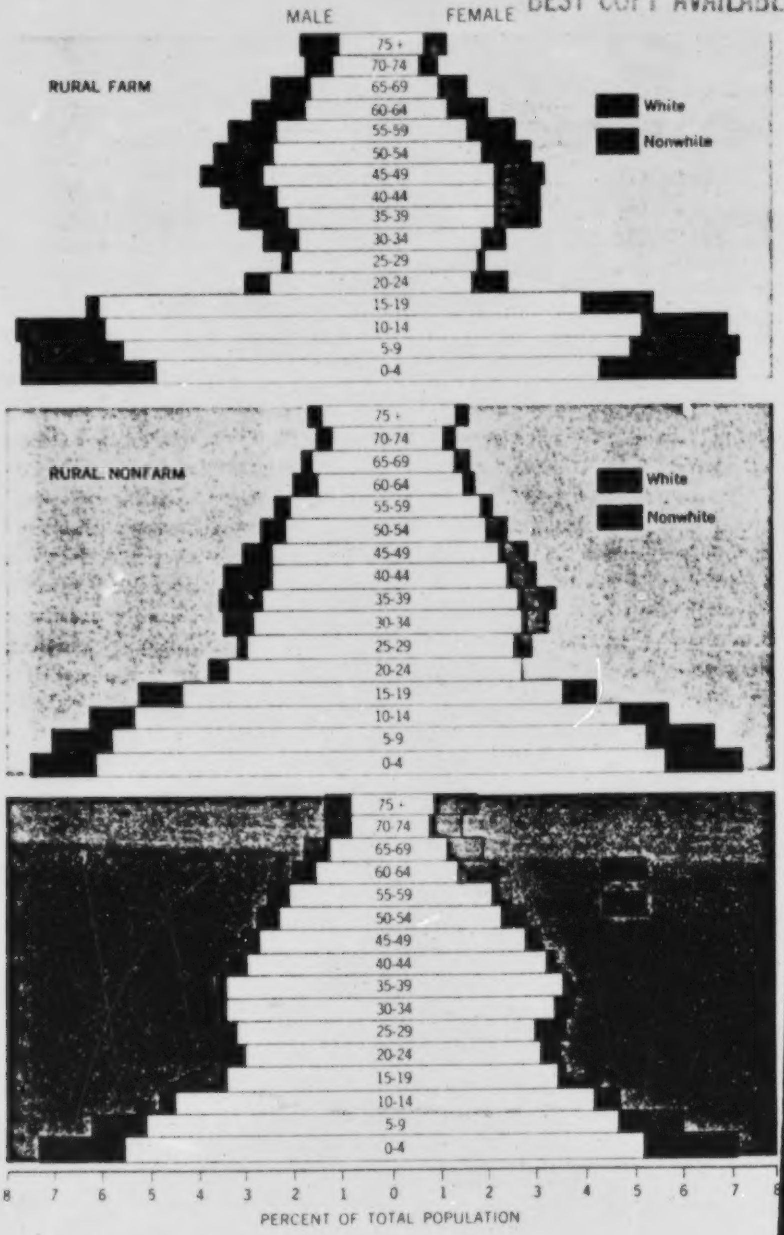

Source: Appendix tables A-3, A-4, and A-5.

color differences for each sex are evident. A higher proportion of nonwhite males than of white males is found through age 14, virtual equality through age 29, and lower proportions at all ages from 30 years upward. Among nonwhite females, on the other hand, the percentages exceed those for white females for all 5-year age groups through age 39 and fall below them at all ages beginning from 40 years upward.

Among the numerous inferences that may be drawn from the population pyramids in figure III–1 are the following: First, the rate of earlier out-migration from the rural-farm population, reflected in the small proportions aged 20 to 29 in 1960, must have been very great. The total number of persons in this age group—survivors of births of the 1930's when low birth rates prevailed—is small. A migratory movement of comparable magnitude from the rural-nonfarm population is less evident, and among males, the first intimation of out-migration occurs in the 25-to-29-year age group. Second, the proportion of white children under 5 years old in the rural-farm population in 1960 is markedly smaller than in the rural-nonfarm or urban population. This suggests that the volume of white rural-to-urban migration in the future will become more moderate, and that the growth of cities through farm-to-city migration may diminish. Third, the comparative youthfulness of the nonwhite population of all residence categories is striking. The larger proportions of nonwhite than white females in urban areas at all ages through 39, not only reflect high birth rate levels, but also suggest large-scale, age-selective migration of nonwhite women to urban areas in the recent past.

Proportions in selected age ranges, by color. To examine the age structure in more detail without the tedium of meticulous consideration of each 5-year age group, it is convenient to deal with wider age ranges. In part, the groupings used represent phases of the life cycle, both from the standpoint of physiological maturation and socially defined stages. In part, also, the groups were selected to represent some of the highly migratory segments of the age structure. The age groups used include three that represent youth, under 5 years, 5 to 14 years, and 15 to 19 years; three that represent economically productive adults, 20 to 24 years, 25 to 44 years, and 45 to 64 years; and one that represents old age, 65 years and over.[3] Table III–2 shows the percentage distribution of the population in these selected age groups in 1960, by residence and color.

Proportions under 5 years of age. The number of young children in any population is closely related to birth levels of the recent past. The proportion of the population at a given age, is, of course, related to the numbers in other age groups as determined by the particular history of births, deaths, and migration. Children under 5 years are of special interest not only because their numbers have implications for future population growth, but also because they are socially and economically dependent upon others.

Children under 5 years of age in 1960 comprised more than one-tenth (11.3 percent) of the total population of the United States. The proportion was

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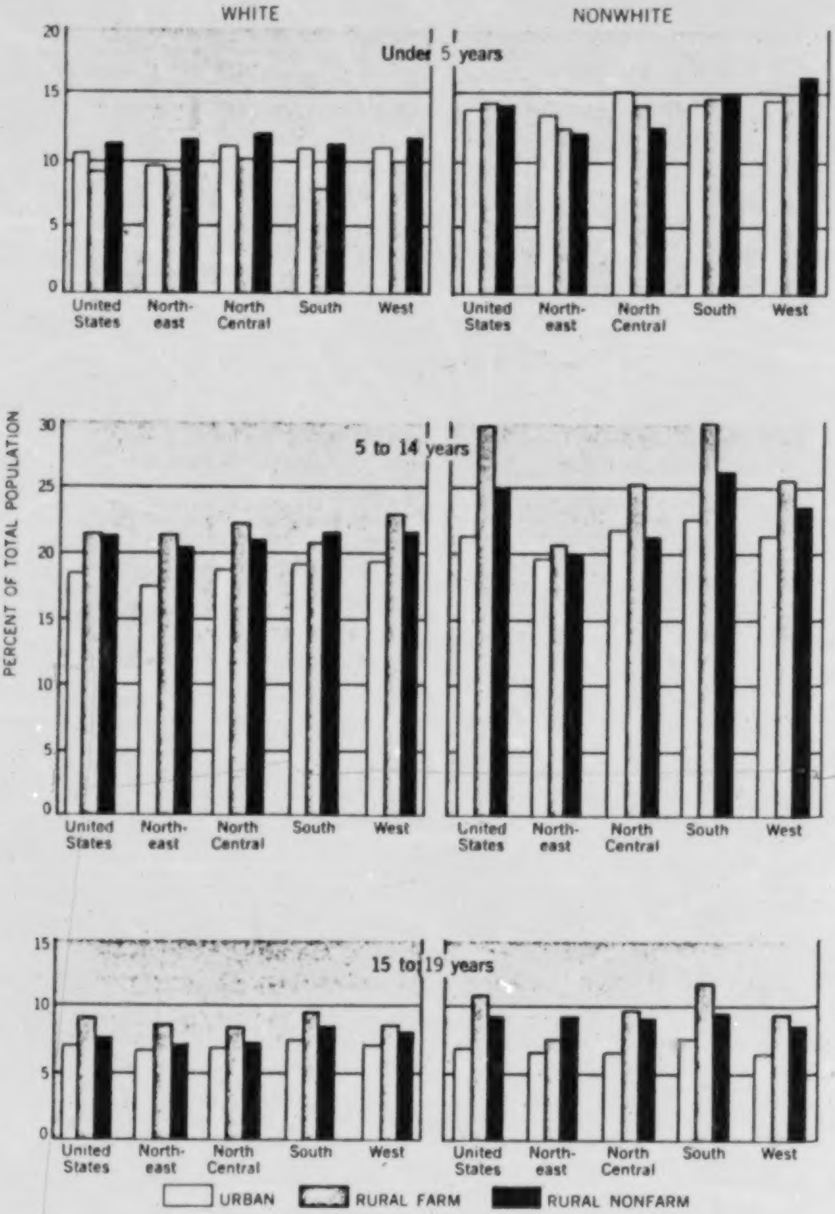
Figure III–2.—Percent of Total Population Under Age 20, by Residence, Color, and Age, for Regions of the Conterminous United States: 1960



Source: Appendix table A–6. Total computed from data in 1960 Census of Population.

Table III-2.—PERCENT DISTRIBUTION OF POPULATION BY RESIDENCE, COLOR, AND AGE, FOR THE CONTERMINOUS UNITED STATES: 1960

Residence and color	All ages	Under 5 years	5 to 14 years	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 years and over
United States	100.0	11.3	19.7	7.5	6.0	26.1	20.3	9.0
White	100.0	10.9	19.4	7.3	6.0	26.3	20.7	9.4
Nonwhite	100.0	14.4	22.6	8.4	6.5	25.2	16.8	6.1
Rural farm	100.0	9.9	22.7	9.4	4.3	21.1	23.3	9.3
White	100.0	9.3	21.7	9.1	4.2	21.7	24.3	9.8
Nonwhite	100.0	14.8	29.6	11.7	5.4	16.5	15.8	6.2
Rural nonfarm	100.0	12.1	21.6	8.0	6.1	25.1	18.2	8.9
White	100.0	11.8	21.2	7.8	6.1	25.6	18.5	9.1
Nonwhite	100.0	14.8	25.7	9.5	6.5	20.8	15.2	7.5
Urban	100.0	11.2	18.9	7.0	6.2	27.0	20.7	9.1
White	100.0	10.8	18.5	7.0	6.1	27.0	21.1	9.5
Nonwhite	100.0	14.3	21.7	7.0	6.6	27.3	17.3	5.8

Source: Retabulated and computed from data in 1960 Census of Population.

smaller for whites and considerably larger for nonwhites, 10.9 percent as compared with 14.4 percent. The proportion of young children was greatest in the rural-nonfarm residence group, intermediate in the urban, and lowest in the rural-farm category for both nonwhites and whites. In the nonwhite population, however, the percentage of children under 5 years was equally high in the rural-farm and rural-nonfarm populations. Differences in the proportions of young children among the four regions, by residence and color, are shown in figure III-2.

The pattern with respect to percentages of white children under 5 years, that is, highest in rural-nonfarm, intermediate in urban, and lowest in rural-farm, is true in each of the regions and in six of the nine divisions. In addition to being more variable than the pattern for whites, the dominant pattern for nonwhite children under 5 years is rural-nonfarm, high; rural-farm, intermediate; and urban, low. This pattern holds for the South and the West and for three of the nine divisions.

Proportions 5 to 14 years of age. In addition to possessing most of the social and economic attributes of the age group under 5 years, youngsters 5 to 14 years old correspond closely to the kindergarten and elementary school-age populations. Since persons in this age range are not often migratory apart from family units and have very low mortality rates, the size of this age category is primarily a reflection of fertility levels from 1945 to 1955.

Children who were 5 through 14 years old in 1960 accounted for nearly one-fifth of the total population of the United States. The proportion of white youths of these ages was 19.4 percent; of nonwhite youths, 22.6 percent. The proportion of persons aged 5 to 14 years was highest in the rural-farm and lowest in the urban residence category. This order was true for white as well as nonwhite youths, as shown in table III-2, and prevailed in most regions and divisions, as shown in appendix table A-6. Among whites, the most notable exceptions were in the three divisions of the South where proportions of persons 5 to 14 years

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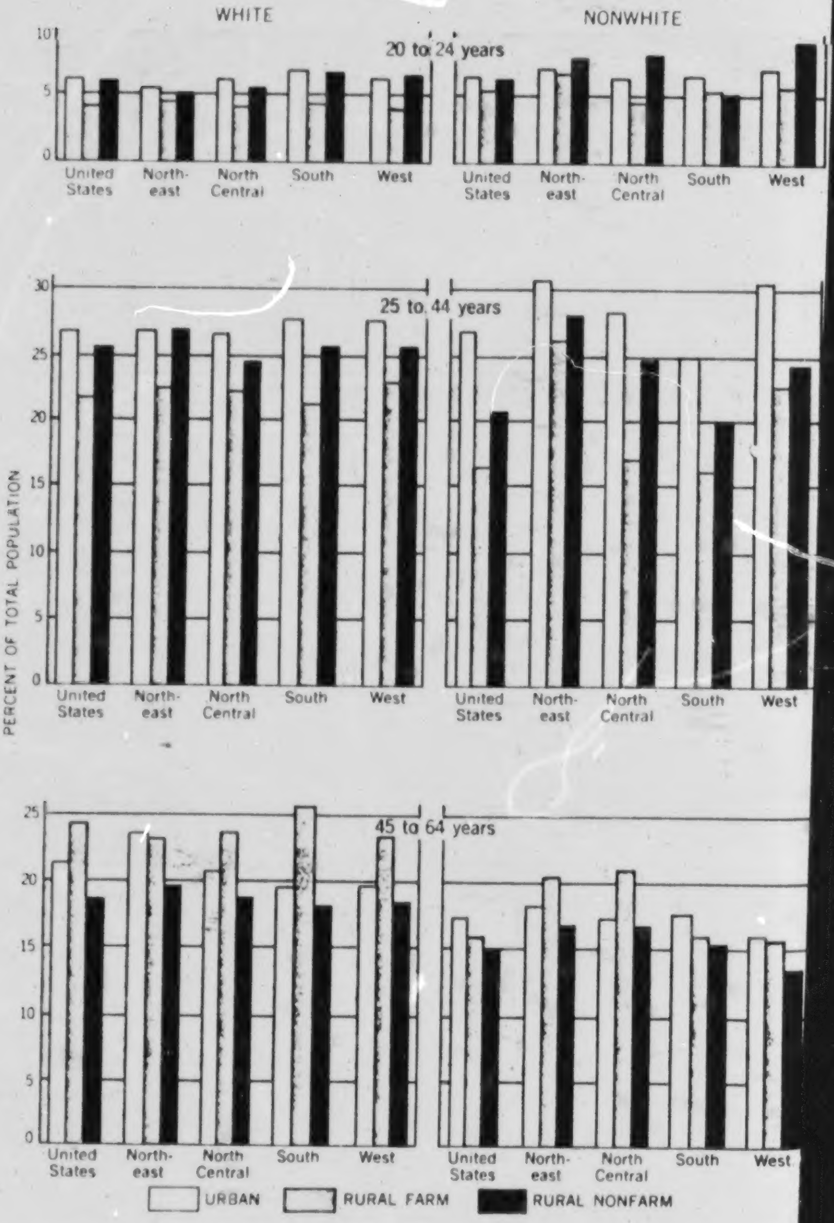
Figure III–3.—PERCENT OF TOTAL POPULATION AGED 20 TO 64, BY RESIDENCE, COLOR, AND AGE, FOR REGIONS OF THE CONTERMINOUS UNITED STATES: 1960



Source: Appendix table A–5. Total computed from data in 1960 Census of Population.

old in the rural-nonfarm population exceeded those in the rural-farm population. Among nonwhites, the main deviations from the general pattern are in New England and the East North Central States, where the proportions of persons 5 to 14 years old was higher among urban residents than among either rural-farm or rural-nonfarm people.

Proportions 15 to 19 years of age. The age group from 15 to 19 years is of special interest, representing as it does a stage in the life cycle of imminent mental and physical maturation; it is an age range during which crucial decisions concerning education, work, and marriage all tend to converge. Thus, its members are highly migratory, especially those in the older part of the age span.

Youths in this age group in 1960 represented nearly 7.5 percent of the total population of the Nation. White youths of these ages comprised 7.3 percent of the total white population and nonwhite youths, 8.4 percent of the total nonwhite population. The proportion of persons who were 15 to 19 years old was highest in the rural-farm population, next highest in the rural-nonfarm, and lowest in the urban population among both whites and nonwhites.

The proportions of 15- to 19-year-olds, by residence and color, for regions are shown in figure III-2. Both rural residence categories in all regions contain larger proportions of white youth aged 15 to 19 years than does the urban. The rural-farm, rural-nonfarm, and urban populations rank in that order with respect to the percentage of whites 15 to 19 years old in all regions and in most of the divisions; among nonwhites, the order of the residence categories is different only in the Northeast Region where the rural-nonfarm population ranks highest.

Proportions 20 to 24 years of age. This age cohort is of interest not only because of its small size, but also because it is highly migratory. The number of persons 20 to 24 years old is small because of the low birth levels of the late 1930's. The high rate of migration of this age group is suggested, for example, by the fact that rural-farm persons 20 to 24 years of age in 1960 represented only 4.3 percent of the population while those 15 to 19 years old represented 9.4 percent. In addition, this stage of the life cycle is characterized by high marriage rates, family formation, and entry into and participation in the labor market.

Young adults between 20 and 24 years old accounted for only 6.0 percent of the total American population in 1960. Among nonwhites the percentage was 6.5 and among whites, 6.0. Differences among the proportions in this age group for the urban and rural-nonfarm residence groups, for both whites and nonwhites, are not great, as may be seen in table III-2.

The proportion of young adults 20 to 24 years of age, by residence and color, is shown for each geographic region in figure III-3. The most frequent pattern for whites in these ages, in the regions as well as in the divisions, is high proportions in the urban, intermediate proportions in the rural-nonfarm, and low proportions in the rural-farm populations. Proportions of nonwhites in this age group, however, are higher among the rural-nonfarm than the urban population in all divisions outside of the South. (See appendix table A-6.)

Proportions 25 to 44 years of age. Adults of these ages represent the stage of the life cycle that is characterized by high levels of labor force participation. For a large part of this age group, childrearing is a primary concern. Persons of these ages are mature, economically active, and are often given preference in the labor market.

Adults 25 to 44 years old accounted for more than one-fourth (26.1) of the total population of the United States in 1960. Among whites, the proportion was above average and among nonwhites, below average. The proportion in this age group for the Nation as a whole for both white and nonwhite was especially high in the urban and especially low in the rural-farm population; in the rural-nonfarm population it was intermediate. These percentages by residence and color, for regions, are shown graphically in figure III-3.

Proportions 45 to 64 years of age. Older adults, here considered as persons 45 to 64 years of age, are often characterized by reduced physical activity and labor force participation, and for a large majority, by decreased mobility, both occupationally and spatially. In contrast to previous age groups, the incidence of illness, disability, and widowhood rises for those in this age group.

Adults 45 to 64 years old comprised approximately one-fifth (20.3 percent) of the total American population in 1960. As shown in table III-2, the proportion among nonwhites was much lower than for whites, the respective percentages being 16.8 and 20.7. Among whites, classed by residence, the percentages of persons 45 to 64 years old were highest in the rural-farm population, intermediate in the urban, and lowest in the rural-nonfarm. Among nonwhites, the percentages were highest in the urban, intermediate in the rural-farm, and lowest in the rural-nonfarm sectors.

Figure III-3 also summarizes the proportions of adults 45 to 64 years old by residence and color, for each of the regions in 1960. Among whites, the pattern of high proportions in the rural-farm population, intermediate proportions in the urban, and low proportions in the rural-nonfarm populations, was true of all except two divisions. Among nonwhites, numerous variations in pattern in the proportion 45 to 64 years old were found in the various divisions. (See appendix table A-6.)

Proportions 65 years old and over. Persons aged 65 years and over, a rapidly expanding segment of the American population, represent the final phase of the life cycle. Much of the interest in this age group, apart from its increasing size, relates to problems surrounding retirement, such as income, housing, and health services and facilities.

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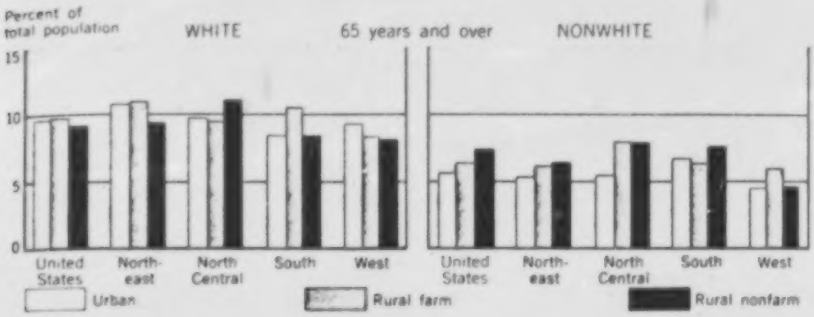
Persons in this age group comprised less than one-tenth (9.1 percent) of the total population in 1960. Among whites the proportion was 9.4 percent and among nonwhites, 6.1 percent. In terms of residence, the white population 65 years old and over was proportionately greatest in the rural-farm category, next in the urban, and least in rural-nonfarm. The proportion of nonwhites 65 years old and over, on the other hand, was greatest in the rural-nonfarm population, next in the rural-farm, and lowest in the urban.

Figure III–4.—Percent of Total Population at Ages 65 and Over, by Residence and Color, for Regions of the Conterminous United States: 1960



Source: Appendix table A–6.

The percentage of persons 65 years old and over, by residence and color, for each of the regions of the Nation is shown in figure III–4. For the white population, the most common pattern of relationship between the three residence groups in terms of percent of population aged 65 years old and over is that the rural-farm population has the highest proportion aged, followed by the urban population, and trailed by the rural-nonfarm. This pattern prevails in two geographic regions and five divisions. For the nonwhite population, on the other hand, the percent of the population 65 years old and over is usually highest in the urban population and lowest in the rural-nonfarm population. (See appendix table A–6).

Summary. The dominant residence pattern by age [4] in the American population in 1960 may be summarized in the following tabular form:

Age group	Rural farm	Rural nonfarm	Urban
Under 5 years	Low	High	Intermediate.
5 to 14 years	High	Intermediate	Low.
15 to 19 years	High	Intermediate	Low.
20 to 24 years	Low	Intermediate	High.
25 to 44 years	Low	Intermediate	High.
45 to 64 years	High	Low	Intermediate.
65 years old and over	High	Low	Intermediate.

The rural-farm population, in relation to other residence groups, contained large proportions of the young and of older adults, and smaller proportions of young adults. The white farm population in 1960, however, contained very small percentages of children under 5 years of age. This was not true of the nonwhite farm population, although the proportions under 5 years were often higher for rural-nonfarm populations. The nonwhite rural-farm population also differed from the characterization outlined, in that the proportions of older adults were not large.

The age structure of the rural-nonfarm population differed markedly from region to region, but as an aggregate it was often intermediate. That is, the rural-nonfarm population generally had larger proportions of young people than did the urban population, but smaller proportions than the rural-farm population. It generally had larger proportions of young adults than the rural-farm population, but smaller proportions than did the urban population. Finally—and this is not true of all parts of the Nation—the rural-nonfarm population usually contained small percentages of older adults.

The age structure of the rural population has implications for a wide range of social and economic phenomena. The large proportions of young and old, coupled with small proportions of young adults in the farm population, have an impact upon all institutional life. Conservative political behavior, declining interest and involvement in farm organizations, increased welfare loads, and reluctance to increase taxes for whatever purpose—all of which are to varying extents features of the contemporary rural scene—are rooted at least in part in the age composition of the farm population.

Dependency ratios, by color. Age data are often used for the purpose of gaining insights into variations in dependency burdens in populations and segments of populations. The dependency ratio, as used here, is based upon the number of youth under 20 and the number of older persons 65 years old and over in relation to the working population defined here as those persons aged 20 to 64 years.[5] Hence, three dependency ratios, representing total dependency, youth dependency, and aged dependency, have been computed. Quite clearly, such ratios are merely approximations of reality with respect to economic or social dependency. It is obvious that many persons under 20 years as well as many persons 65 years old and over are fully employed and self-supporting. Certainly not all of those aged 20 to 64 years are independent, nor do all who have income support others as the ratio implies. Nonetheless, the dependency ratios used here are of value in estimating dependency in different segments of the population.

Dependency ratios for the United States and regions in 1960, by residence and color, are shown in table III–3. Similar ratios for divisions are found in appendix table A–7. Table III–3 shows a total dependency ratio of 90.7 for the United States, a youth ratio of 73.4, and an aged ratio of 17.3. A total dependency ratio of 90.7 indicates that for every 100 persons in the productive, "independent" ages of 20 to 64 years, there are about 91 persons in the dependent ages under 20 years and 65 years and over. A youth ratio of 73.4 means that there are 73 persons under 20 years for every 100 persons in the productive ages; and an aged ratio of 17.3, that there are approximately 17 persons 65 years old and over for every 100 persons in the productive ages.

Table III-3.—DEPENDENCY RATIOS FOR THE TOTAL DEPENDENT POPULATION AND ITS YOUTH AND AGED COMPONENTS, BY RESIDENCE, COLOR, AND REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region	Dependency ratios[1]											
	Total			Rural farm			Rural nonfarm			Urban		
	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite
United States:												
Total	90.7	88.9	106.4	105.4	99.4	165.2	102.6	99.6	135.1	85.8	84.6	95.2
Youth	73.4	71.1	93.7	86.2	79.9	148.8	84.5	81.5	117.6	68.9	67.0	84.0
Aged	17.3	17.8	12.6	19.2	19.5	16.4	18.1	18.2	17.5	16.9	17.6	11.2
Northeast:												
Total	82.2	82.4	80.5	101.3	101.4	87.7	92.2	92.2	90.3	79.7	79.7	80.0
Youth	64.3	63.8	71.1	79.8	79.8	76.5	75.1	75.0	78.2	61.7	60.9	70.8
Aged	17.9	18.6	9.3	21.5	21.6	[2]11.2	17.2	17.3	12.0	18.0	18.8	9.2
North Central:												
Total	93.0	92.8	95.7	101.7	101.5	134.2	104.8	104.8	102.4	88.5	87.8	95.0
Youth	74.5	73.7	85.0	82.7	82.6	115.6	82.9	82.8	86.6	70.9	69.6	84.6
Aged	18.5	19.1	10.7	19.0	19.0	18.5	21.9	22.0	15.8	17.5	18.3	10.4
South:												
Total	96.0	90.2	121.4	110.4	96.3	168.3	106.2	99.1	141.7	88.7	84.9	104.8
Youth	80.0	74.0	106.2	90.7	75.8	151.8	89.5	82.8	123.1	73.7	69.4	91.4
Aged	16.0	16.2	15.1	19.7	20.5	16.5	16.7	16.3	18.7	15.0	15.4	13.4
West:												
Total	90.0	89.8	92.3	101.4	100.1	128.4	99.3	98.5	114.1	87.4	87.4	87.4
Youth	73.7	73.1	83.7	85.2	83.8	114.6	83.8	82.6	104.3	71.0	70.4	79.1
Aged	16.2	16.8	8.7	16.2	16.3	13.8	15.6	15.9	9.8	16.4	17.0	8.3

[1] Dependency ratios are defined as follows: "Youth dependency ratio" is the number of persons under 20 years per 100 persons aged 20 to 64 years; "Aged dependency ratio" is the number of persons 65 years and over per 100 persons aged 20 to 64 years; "Total dependency ratio" is the sum of the youth and aged ratios.

[2] Based upon fewer than 1,000 persons 65 years and over.

Source: Retabulated and computed from data in 1960 Census of Population.

The total burden of dependency among nonwhites considerably exceeded that of whites; the dependency ratios were about 106 and 89, respectively. This is so because of the relatively large youth dependency ratio of the nonwhite population, about 94 as compared with only 71 for the white population. In the white population the dependency load of the aged is higher than that of the nonwhite population, 18 versus 13. The burden of support of youth far outweighs the burden of support of the aged, with the net result of markedly higher total dependency burdens for the nonwhite population.

The burden of dependency as defined here was greatest in the rural residence groups and least in the urban population of the Nation, for both whites and nonwhites. Although differences in dependency ratios between the rural-farm and rural-nonfarm residence groups were not great, the burden of dependency was greater in the rural-farm sector when color was not considered. The total

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and youth dependency ratios of the rural-nonfarm white population, however were slightly higher than those of the rural-farm population. In addition, th aged dependency ratio of the nonwhite rural-nonfarm population exceeded tha of the nonwhite rural-farm population. Extraordinarily high total dependenc ratios for nonwhites were found in the rural-farm and rural-nonfarm population of the Nation, 165.2 and 135.1, respectively.

The total burden of dependency in 1960 was highest in the South, followed by the North Central, the West, and the Northeast Regions. To a large degree this regional order was determined by the level of youth dependency ratios, and especially by the high nonwhite youth ratio of the South. The white youth dependency ratio was similar in all regions except in the Northeast where it was only 63.8. The white aged dependency ratio was highest in the North Central Region, followed by the Northeast, West, and South, but for nonwhites it was higher in the South than in the other regions.

Regional variations by residence generally conformed to the patterns of high rural and low urban dependency loads. The white youth dependency ratio was higher in the rural-nonfarm than in the rural-farm portions of the South and North Central Region, as was the case for the white aged ratio in the North Central Region. The nonwhite aged ratio was notably higher in the rural-nonfarm than in the rural-farm portions of the South.

The extent to which dependency ratios for the three residence groups deviate from the national average load of dependency in the Nation, regions, and divisions is summarized for the white population in table III–4; for the nonwhite population in table III–5.

In all geographic regions and divisions the white youth dependency ratios for the rural-farm and rural-nonfarm populations exceeded the national average, whereas the prevailing pattern for the urban population was one of lower dependency ratios than the national average. There were no regions in which the urban white youth dependency ratio was as great as the national average, and only three of the nine geographic divisions had such ratios greater than the national average. These exceptions were the West North Central, West South Central, and Mountain Divisions. On the map these divisions cover the area west of the Mississippi River extending to the eastern border of the three Pacific Coast States. Deviations from the national average white youth dependency ratios were greatest for the rural-farm population in the Mountain and West North Central Divisions; for the rural-nonfarm population in the Mountain, East South Central, and West South Central Divisions; and for the urban population in the Mountain States—where the ratio exceeded the national average—and in the Middle Atlantic States where it was below the national average. (See table III–4.)

The array of deviations of the white aged dependency ratios from the national average white aged ratio is somewhat less tidy. In all regions except the West,

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the white aged ratios for the rural-farm population were above the national average, but the deviations were minor as compared with those characterizing the youth dependency ratios of the same areas. On the other hand, the regional white aged ratios for the rural-nonfarm population were below the national average except in the North Central Region. This, too, is in sharp contrast with the pattern of deviations of the white youth dependency ratios for the rural-nonfarm population, which were well above the national average in all regions. Finally, although all regions had urban white youth dependency ratios below the national average, the Northeast and North Central Regions, which contained about 62 percent of the white urban aged population of the Nation, had aged dependency ratios above the national average.

Table III-4.—DEVIATIONS OF YOUTH AND AGED DEPENDENCY RATIOS FROM THE NATIONAL AVERAGE FOR THE WHITE POPULATION, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Deviation from national average[1]					
	White youth dependency ratio			White aged dependency ratio		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
United States	8.8	10.4	-4.1	1.7	0.4	-0.2
Regions:						
Northeast	8.7	3.9	-10.2	3.8	-0.5	1.0
North Central	11.5	11.7	-1.5	1.2	3.2	0.5
South	4.7	11.7	-1.7	2.7	-1.5	-2.4
West	12.7	11.5	-0.7	-1.5	-1.9	-0.8
Divisions:						
New England	7.2	7.2	-5.8	5.3	0.5	2.4
Middle Atlantic	9.1	5.2	-11.6	3.4	-0.3	0.6
East North Central	10.4	13.3	-2.2	3.7	0.8	-0.3
West North Central	12.4	8.4	0.4	-1.1	11.4	2.7
South Atlantic	4.2	10.2	-6.1	3.1	-3.8	-1.4
East South Central	6.7	16.1	-1.8	3.3	-0.8	-2.3
West South Central	3.1	10.3	4.0	1.4	3.0	-3.6
Mountain	20.5	18.0	9.9	-3.8	-2.3	-2.5
Pacific	6.3	8.3	-3.5	0.4	-1.7	-0.4

[1] Youth dependency ratio for indicated population group minus 71.1, the white youth dependency ratio for the United States; or aged dependency ratio for indicated population group minus 17.8, the white aged dependency ratio for the United States.

Source: Table III-3 and appendix table A-7.

Among the divisions, the white aged dependency ratios of the rural-farm population were uniformly above the national average, except for the West North Central and Mountain Divisions. These were the very two divisions for which the rural-farm youth dependency ratios were most above the national average. Rural-nonfarm white aged dependency ratios were below the national average in five divisions and below the average in the other four. In only the West North Central Division was the ratio markedly higher than the national average, which it exceeded by 11.4 percentage points. On the other hand, in four divisions the differences from the national average were less than 1 percentage point. All of these were east of the Mississippi River. Urban white aged depend-

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ency ratios were predominently below the national average. The only exceptions to this pattern were found in the New England, Middle Atlantic, and West North Central Divisions.

The pattern of differences between nonwhite dependency ratios and the nonwhite national average ratio is rather different than that observed for the white population. Table III-5 presents nonwhite youth and aged dependency ratios for the rural-farm, rural-nonfarm, and urban populations by geographic region and division. The national average nonwhite youth ratio was 93.7. To begin with, this is appreciably higher than the corresponding white national average ratio of 71.1. In the rural-farm population the nonwhite youth dependency ratio exceeded the national average by 55.1 percentage points, as compared with an excess of only 8.8 points for the white rural-farm population. Similarly, the deviation of the youth dependency ratios from the national average for the rural-nonfarm and urban nonwhite populations each exceeded considerably the deviations in the corresponding sectors of the white population. Tables III-4 and III-5 provide 42 pairs of figures representing the difference from the national average of youth dependency ratios for regions, divisions, and residence groups for the white and nonwhite populations. In over 80 percent of the pairs, the difference is greater for the nonwhite population. Thus, the nonwhite population not only has a higher national average youth dependency ratio, but the variations from this national average are almost uniformly greater than the variations found around the white national average youth dependency ratio.

Table **III-5.**—DEVIATIONS OF YOUTH AND AGED DEPENDENCY RATIOS FROM THE NATIONAL AVERAGE FOR THE NONWHITE POPULATION, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Deviation from national average[1]					
	Nonwhite youth dependency ratio			Nonwhite aged dependency ratio		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
United States	55.1	23.9	-9.7	3.8	4.9	-1.
Regions:						
Northeast	-17.2	-15.5	-22.9	[2]-1.4	-0.6	-3.
North Central	21.9	-7.1	-9.1	5.9	3.2	-2.
South	58.1	29.4	-2.3	3.9	6.1	0.
West	20.9	10.6	-14.6	1.2	-2.8	-4.
Divisions:						
New England	[2]-2.6	-27.6	-12.8	[2]21.9	-3.2	-2.
Middle Atlantic	-18.2	-13.0	-23.7	[2]-3.0	-0.1	-3.
East North Central	-6.3	-21.0	-9.5	[2]8.6	2.8	-3.
West North Central	36.0	16.0	-6.7	4.6	3.9	2.
South Atlantic	58.8	27.0	-5.9	1.6	2.2	-1.
East South Central	61.2	34.6	2.5	6.1	10.7	3.
West South Central	49.4	30.1	1.1	5.9	11.1	2.
Mountain	44.3	39.4	-0.7	-0.2	-2.0	-2.
Pacific	-6.1	-17.3	-16.1	2.9	-3.5	-4.

[1] Youth dependency ratio for indicated population group minus 93.7, the nonwhite yout dependency ratio for the United States; or aged dependency ratio for indicated population grou minus 12.6, the nonwhite aged dependency ratio for the United States.

[2] Ratio based upon fewer than 1,000 persons in age category.

Source: Table III-3 and appendix table A-7.

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Among the regions, nonwhite youth dependency ratios exceed the national average most in the South. The nonwhite youth dependency burden in the South is more above the national average in the rural-farm population than in the rural-nonfarm; in the urban South, the dependency ratio is below the national average, but not nearly as much below as it is in the other regions. In the Northeast Region, nonwhite youth dependency loads fall far below the national average, regardless of residence category. The youth dependency ratio for the urban Northeast is 22.9 percentage points below the national average, while the rural-farm and rural-nonfarm ratios are, respectively, 17.2 and 15.5 percentage points below the national average. Those geographic divisions east of the Mississippi River which are outside the South, as well as the Pacific Division, all have nonwhite youth dependency ratios lower than the national average, regardless of residence category. On the other hand, in the geographic divisions of the South and those lying between the Mississippi River and the Rockies, dependency ratios for nonwhites in the rural-farm and rural-nonfarm populations were well above the national average, indeed by as much as 61.2 percentage points in the rural-farm population of the East South Central Division.

The aged dependency ratio for rural-farm nonwhites, as indicated in table III-5, is 3.8 percentage points above the national average ratio of 12.6 for all nonwhites; the rural-nonfarm nonwhites are 4.9 points above the national average, while the urban nonwhites are 1.4 points below the national average. For rural-farm nonwhites, the aged dependency ratio was below the national average in the Northeast Region and in two divisions, the Middle Atlantic and Mountain States. For the nonwhite rural-nonfarm population, it was below the national average in the Northeast and West Regions and in each of the divisions comprising these regions. Aged dependency was much in excess of the national average in the East South Central and West South Central Divisions. The aged dependency ratio for urban nonwhites was higher than the national average only in the South, in two of the three divisions of the South, namely, the East South Central and West South Central States, and in the West North Central Division.

The relative positions of the three residence components with respect to dependency loads of youth and aged, by region, division, and color, are summarized in the table III-6. Nationally, the rural-nonfarm population ranks first; the rural-farm, second; and the urban, third in terms of the white youth dependency ratio. In all divisions but the West South Central, the urban white youth dependency load is lower than that of either the rural-farm or rural-nonfarm residence category; in all but four divisions—New England, Middle Atlantic, West North Central, and Mountain—the rural-nonfarm white youth dependency load exceeds that of the rural-farm population. The pattern of the nonwhite youth dependency ratios for the Nation as a whole is rather different. The rural-farm population ranks first, followed by the rural-nonfarm, and in turn by the urban. In all four regions, the nonwhite youth dependency load is the highest, as is also

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the case in all divisions except New England, the East South Central, and the Pacific. Youth dependency ratios for all divisions except the Middle Atlantic are higher for the rural-farm population than for the rural-nonfarm or the urban.

Table III-6.—RANK OF RURAL-FARM, RURAL-NONFARM, AND URBAN POPULATIONS BY YOUTH AND AGED DEPENDENCY RATIOS, BY COLOR, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	White youth dependency ratio			Nonwhite youth dependency ratio			White aged dependency ratio			Nonwhite aged dependency ratio		
	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban
United States	2	1	3	1	2	3	1	2	3	2	1	3
Regions:												
Northeast	1	2	3	2	1	3	1	3	2	[1]2	1	3
North Central	2	1	3	1	2	3	2	1	3	1	2	3
South	2	1	3	1	2	3	1	2	3	2	1	3
West	1	2	3	1	2	3	2	3	1	1	2	3
Divisions:												
New England	1	2	3	[1]1	3	2	1	3	2	[1]1	3	2
Middle Atlantic	1	2	3	2	1	3	1	3	2	[1]2	1	3
East North Central	2	1	3	1	3	2	1	2	3	[1]1	2	3
West North Central	1	2	3	1	2	3	3	1	2	1	2	3
South Atlantic	2	1	3	1	2	3	1	3	2	2	1	3
East South Central	2	1	3	1	2	3	1	2	3	2	1	3
West South Central	3	1	2	1	2	3	2	1	3	2	1	3
Mountain	1	2	3	1	2	3	3	1	2	1	2	3
Pacific	2	1	3	1	3	2	1	3	2	1	2	3

[1] Ratio based upon fewer than 1,000 persons in age category.

Source: Appendix table A-7.

In the Nation as a whole, in terms of aged dependency loads for whites, the rural-farm population ranks first; the rural-nonfarm, second; and the urban, third. Despite the national pattern, in only three of the nine divisions does the urban white population rank third; the predominant rank, which is held by six divisions, is the second or intermediate rank. The aged dependency load for the white rural-farm population is higher than that of either the rural-nonfarm or urban populations in six of the nine divisions; in two of the nine, the West North Central and the Mountain, it ranks third; and in one, the West South Central, it ranks second. Nationally, the nonwhite aged dependency load is highest in the rural-nonfarm population, second in the rural-farm, and third in the urban population. This order is maintain for the three Southern divisions where the nonwhites are concentrated. In the two divisions of the West as well as the two divisions of the North Central Region, aged dependency for nonwhites is higher in the rural-farm than in the rural-nonfarm population.

It is clear that high loads of dependency carry with them economic burdens such as relatively large expenditures for the care and education of the young and support of the aged. Heavy youth dependency implies a style of life in which a disproportionately large share of the parents' time is used in the care and nurture of the young. These social and economic by-products of high dependency loads are most prevalent in the rural-farm part of the population. They are also

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more prevalent among nonwhites than whites, and in some regions more than in others.

Age composition of rural populations by distance from SMSA's

In this section the nature of the relationship of the age composition in rural areas to distance from the nearest SMSA is considered in some detail.[6] In keeping with the framework outlined in chapter I, it is assumed that the large metropolis has an influence on the overall age structure of rural areas and directly alters that structure, chiefly through the process of migration. Norms with respect to family size, health, and medical practices current in the metropolis generally spread throughout the countryside. Despite the relatively small degree of rural-urban differentiation, such norms are not fully and completely diffused throughout the rural population. One of the important barriers to more complete knowledge and acceptance of urban norms on the part of the hinterland population is distance. Thus, the influence of the metropolis on the hinterland is expected to diminish as distance from it increases. In general, the influence of urban norms affecting births and deaths and thereby age composition, is expected to weaken or disappear as distance from the metropolis increases.

The metropolis also directly affects the age structure of rural populations by attracting migrants. For many years, urban areas have attracted people in the young, economically productive age groups from the farm population, with results which are readily apparent in the age composition of hinterland areas. Urban areas have had the same attraction for residents of small towns, villages, and other nonfarm populations living in the more remote areas. Another portion of the rural-nonfarm population, however, is comprised of suburbanites who by the whim of definition are part of the rural population. In general, it is expected that the attraction of the metropolis, and, therefore, the rate of out-migration from rural-farm and hinterland rural-nonfarm areas, would decrease with increasing distance from the metropolis. Due to our inability to separate the components of the rural-nonfarm population, it is expected that inconsistent relationships with distance will be found in different regions of the United States. While the general expectation is to find a gradient pattern in rural age composition, it is recognized that no allowance has been made for the influence of cities with less than 50,000 inhabitants.

The general outline of our expectations regarding the relationship between rural age composition and distance is as follows:

(1) Proportions of youth, both white and nonwhite, in the rural-farm and rural-nonfarm populations are expected to increase as distance from the nearest SMSA increases. This relationship is anticipated for all ages up to 24 years, but it is expected to be less evident in the two highly migratory age groups.

(2) Proportions of adults, both white and nonwhite, in the rural-farm and rural-nonfarm populations, are expected generally to decrease as distance from the nearest SMSA increases. This relationship is anticipated in the age groups 25 to 44 years, 45 to 64 years, and 65 years old and over.

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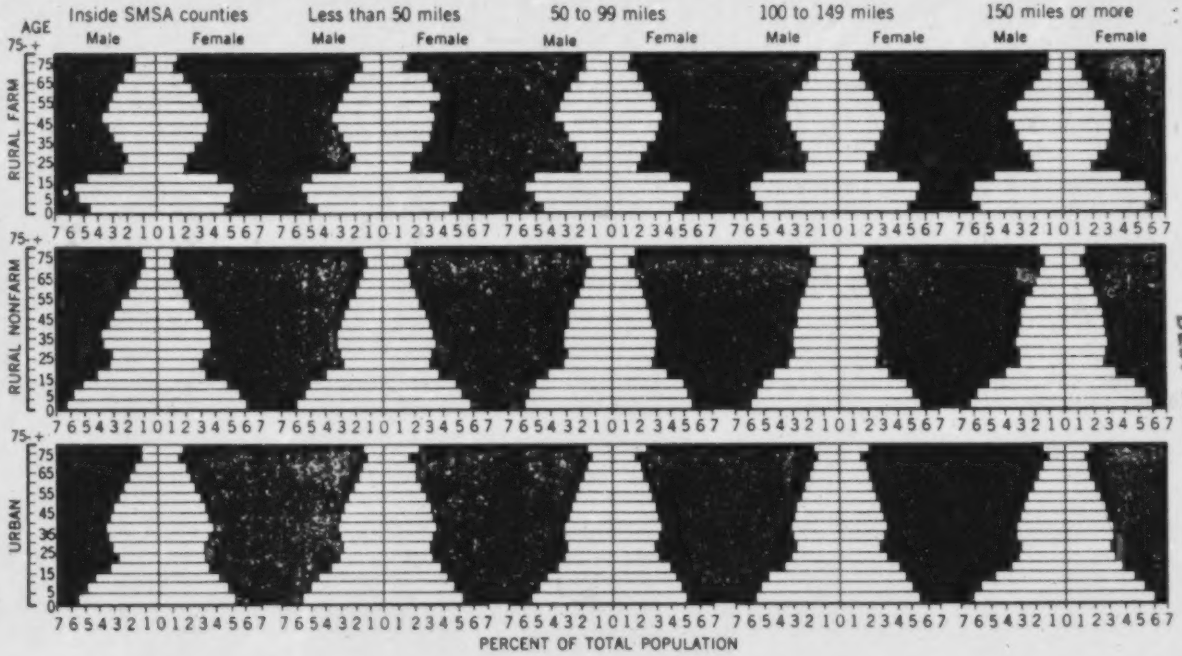
Figure III-5.—PERCENT DISTRIBUTION OF RURAL AND URBAN WHITE POPULATIONS BY SEX, AGE, AND DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Appendix table A-8.

Population profile, by age, sex, color, and distance. Figure III–5 provides an overall picture of age and sex structure of the three residence components by distance from an SMSA, and pertains only to the white population, classified by residence and by five distance bands.

The most striking initial impression gained from figure III–5 is the similarity of the contours for all distance bands within each of the residence categories. Regardless of distance, the characteristic conformations of the rural-farm, rural-nonfarm, and urban populations are evident. However, careful examination of age-sex variations within each residence category reveals important differences with respect to distance. These relationships will be explored more fully in the following pages. Percentage distributions for 5-year age-sex groups of the white population are found in appendix table A–8.

While our scheme has not controlled fully for size of place, and while the precise population mix within residence groups is not known for each distance band, each of the three residence categories, regardless of distance, possesses distinctive characteristics. While Duncan and Reiss effectively demonstrate differences by size of place, it does not seem from our evidence ". . . that one must qualify carefully any general statement about urban-rural differences in age and sex structure."[7]

Proportions in selected age ranges, by color and distance. The relationship between age groups and distance from an SMSA for each residence and color group in the population in 1960 is shown in figure III–6. (Supporting data are given in appendix table A–9.) The seven age groups conforming to the significant life-cycle stages which were used previously in this chapter are again utilized to explore this relationship.

The proportion of the population under 5 years old is greater in areas 150 miles or more from SMSA's than in any 50-mile band of territory closer to the SMSA's. This is true for both whites and nonwhites and for all categories of residence. The prevailing pattern for the white population under 5 years old regardless of residence category is a slight to moderate decline in the proportion with increasing distance from an SMSA until a distance of 100 miles is reached, and an increase in the proportion thereafter. In the nonwhite population, the proportion under 5 years old rises with increasing distance from an SMSA, with the one exception that the urban nonwhite proportion is lower in the zone of less than 50 miles than it is in SMSA's or in the zone from 50 to 99 miles.

Also shown in figure III–6 is the configuration of the proportions of the population 5 to 14 years old in the three residence categories and five distance categories. The general trend is upward as distance from an SMSA increases. The main exception to this trend is in the white rural-nonfarm population, where the trend is downward until a distance of 150 miles is reached. Also contrary to the

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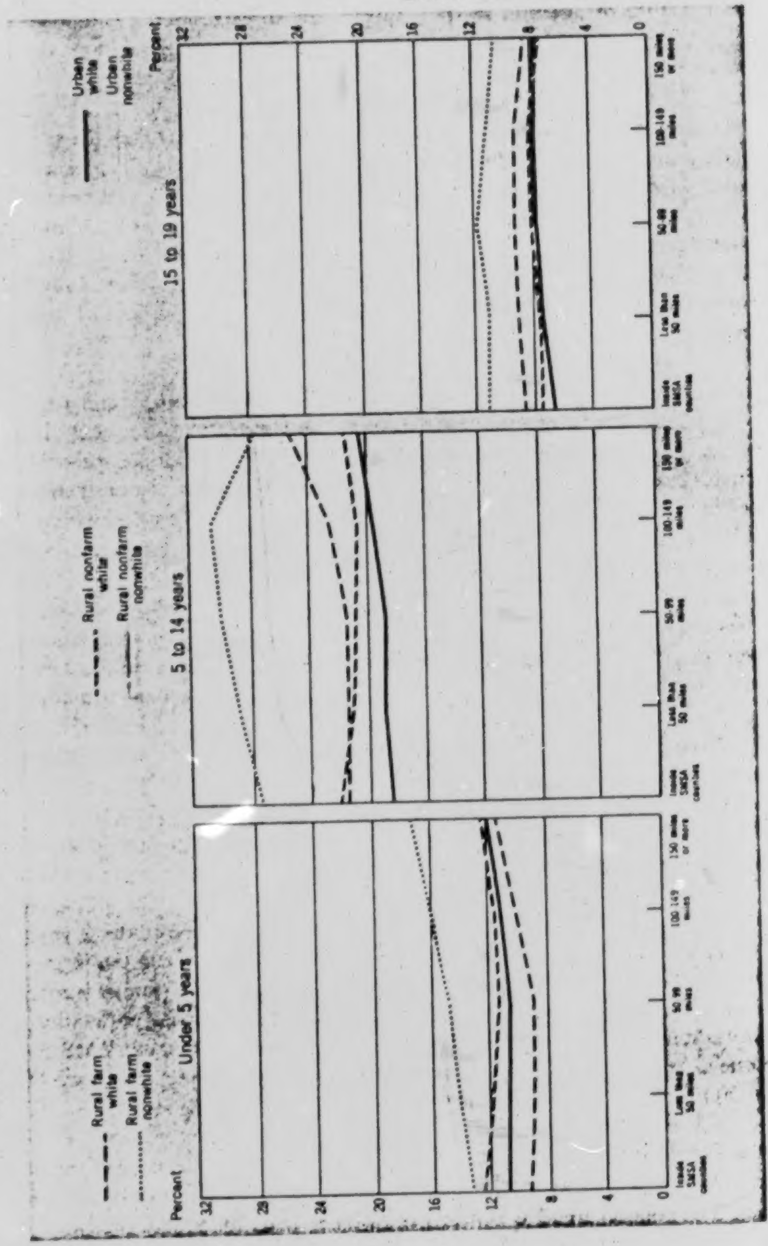
Figure III-6.—Percent of Population in Selected Age Groups, by Residence, Color, and Distance From Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960



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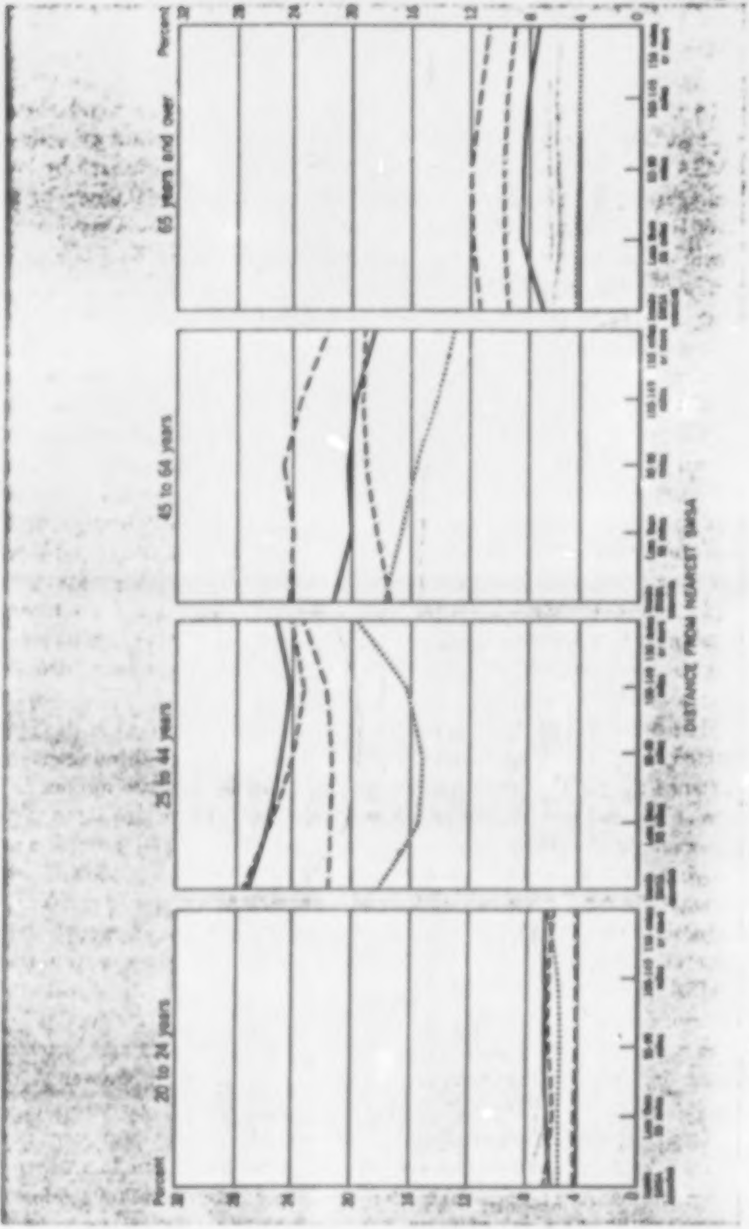

Figure III-6.—Percent of Population in Selected Age Groups, by Residence, Color, and Distance From Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960—Continued

Source: Appendix table A-9.

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general trend is a sharp decline in the proportion in this age range for both rural-farm and urban nonwhites, beginning at a distance of 150 miles from the nearest SMSA.

In the age group 15 to 19 years, the generally upward trend observed for younger ages begins to flatten out. The two ends of the distance scale—within SMSA's and 150 miles or more from SMSA's—are characterized by lower percentages of persons 15 to 19 years old than are found in the intervening territory. This is true for both whites and nonwhites and for all three residence groups. Each of the curves for this age range shown in figure III–6 follows an inverted shallow U-shaped path.

In the next older age group depicted in figure III–6, the population 20 to 24 years old, the configuration of the percentages approaches stability for the white rural-farm and rural-nonfarm populations, is slightly upward for urban whites and rural-farm nonwhites, and declines for the first hundred miles and increases thereafter for urban and rural-nonfarm nonwhites. In all color-residence categories the variation with distance is quite small. The absence of a downward trend with increasing distance from an SMSA, such as might have been expected in the light of greater concentration of economic opportunity in and near SMSA's, calls for some comment. It is quite possible that the high mobility of persons in this age range is responsible via the mechanism of a high rural sex ratio and an extraordinarily low urban sex ratio. That is to say, cohorts of males and females may be offsetting one another where age and distance are controlled.

The proportion of the population which is 25 to 44 years old declines, as expected, with increasing distance from an SMSA, but not throughout the entire distance range. The pattern of decline followed by increase applies to each of the color-residence categories without exception. There are some differences, however, in the distances at which the proportions cease to decline and start moving upward. All residence groups of nonwhites and rural-farm whites are characterized by this reversal of trend beginning at a distance of 50 to 99 miles from the nearest SMSA. For the white urban and rural-nonfarm populations, the reversal of the downward trend begins somewhat further away from the nearest SMSA, in the distance band from 100 to 149 miles. Thus, in all color-residence categories, the proportion of the population in the young, economically productive adult age range, 25 to 44 years, is highest in SMSA's and in territory 150 miles or more from SMSA's, and lowest at some point in between.

In the next older age group, 45 to 64 years, the prevailing pattern of the proportion of population in the age range is downward with increasing distance from an SMSA. This general tendency, which conforms well to *a priori* expectations, is subject to some variation in one or another of the color-residence categories. The downward trend is virtually linear for the rural-farm nonwhite population, and almost as regular for the urban white population. The proportions for

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the rural-farm population, both white and nonwhite, remain at a relatively high level through the distance band of 50 to 99 miles, after which they decline markedly. In the urban nonwhite population the proportion climbs to a peak in the 50-to-99-mile band, and then drops off. Contrary to the general pattern, the proportion for the white rural-nonfarm population rises until a distance of 100 miles from an SMSA and then levels off.

At the age level 65 years and over, the proportion of the population this old declined with increasing distance from an SMSA for the rural-farm population, both white and nonwhite. In all other color-residence categories the highest proportions were found at some distance from the nearest SMSA. For the urban population, both white and nonwhite, and the nonwhite rural-nonfarm population, the maxima were in the distance range of 50 to 99 miles from the nearest SMSA; whereas the maximum for the white rural-nonfarm population was reached in the zone which was 100 to 149 miles from an SMSA.

In general, factors other than distance from a metropolitan area are required to explain variations in the age structure of rural areas. However, the proportion at younger ages tends to increase, and that at older ages to decrease as the distance from metropolitan areas increases. This general relationship is not without exception, nor does the relationship often approach linear form. Despite the heterogeneous character of nonwhites in the most remote distance bands, the nonwhite age structure in relation to distance conformed to expectations more frequently than did that of the white population. Additional controls such as size of urban place, type of agricultural activity, separation of suburban from other rural-nonfarm population, and region, among others, might clarify further the pattern of relationships between age and distance.

Dependency ratios by color and distance. While it is expected that in the rural population the youth dependency ratios generally will increase with greater distance from an SMSA and the aged dependency ratios will decrease, a complex set of factors is in operation so that these assumptions are not put forward without reservations. The anticipated patterns of dependency as related to distance, therefore, are largely exploratory.

Dependency ratios as related to distance from the nearest SMSA for the United States, by residence and color, are shown in figures III–7 and III–8 and in appendix table A–10. As a rule, youth dependency loads increase with increasing distance for all color-residence groups (fig. III–7). In every case, the lowest dependency ratios are found in the SMSA counties. In most instances, the youth dependency ratio in areas within 50 miles of an SMSA rises sharply from the level of the SMSA counties. The rural-farm and rural-nonfarm white youth dependency ratios exhibit slight variations in the first three bands but then rise markedly. The extraordinarily high ratios of the nonwhite population of rural-farm and rural-nonfarm areas show marked increases as distance from an SMSA

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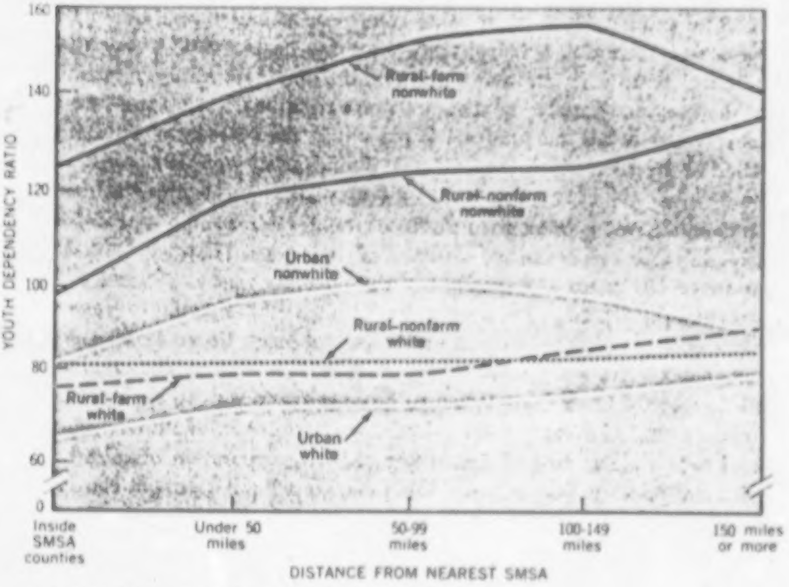
increases. The only exception is *among rural-farm* nonwhites where the ratio drops beyond 150 miles. Youth dependency ratios for urban nonwhites reach a maximum in the 50-to-99-mile distance band and then drop.

Figure **III–7**.—Youth Dependency Ratios for Rural and Urban Populations, by Color and Distance from Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960



Source: Appendix table A-10.

The data contained in figure III–8 and in appendix table A–10 suggests that there is no simple association between aged dependency levels and distance from the nearest SMSA. The relative levels of the aged dependency ratio for rural-farm whites and nonwhites are high in the SMSA counties, rise in the less-than-50-mile distance band, and then fall sharply through the remaining distance bands. In the rural-nonfarm white population, the ratio is low in the SMSA counties, rises sharply to a peak in the 100-to-149-mile distance band, and then drops slightly beyond that distance. The aged dependency ratio for rural-nonfarm nonwhites increases sharply to a high in the 50-to-99-mile distance category and then drops sharply to a low level in the most remote distance band. The aged dependency ratio for urban nonwhites follows the same pattern, at a lower level, as that of rural-farm nonwhites. Among urban whites, the pattern of the aged dependency ratio is one of increase below 100 miles from an SMSA, followed by a decline at greater distances.

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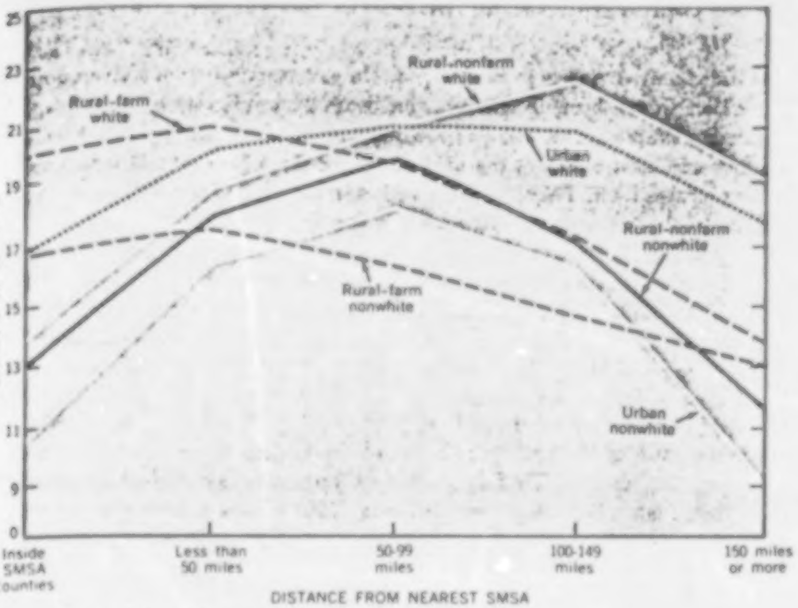
Figure III-8.—Aged Dependency Ratios for Rural and Urban Populations, by Color and Distance from Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960



Source: Appendix table A-10.

As the youth population is generally much larger than the aged population, the pattern of the total dependency ratio in terms of distance from the nearest SMSA should resemble that of the youth dependency load. In all color-residence categories, the total dependency load is lowest in the SMSA counties and rises sharply in the first 50-mile band. With some exceptions, it may be said that total dependency loads generally increase as distance increases. The most deviant instance in this regard is the nonwhite urban population in which the total dependency ratio rises sharply to a peak in the 50-to-99-mile distance band and declines sharply beyond 150 miles of an SMSA.

In summary, youth dependency ratios in the rural population generally tended to increase with greater distance from the nearest SMSA. Regular increases in youth dependency ratios were exhibited only for rural-nonfarm whites and nonwhites. Aged dependency ratios, in the main, tended to decline with increasing distance for the rural-farm population, but to rise and then decline for the rural-nonfarm population. Thus, the social and economic burdens associated with youth dependency fall with increasing weight upon rural populations as the distance from a metropolitan area increases. Also, it is probable that the educational, religious, and other organizational structures in the more remote areas are generally less well equipped to aid families in meeting the problems of youth dependency than is the case in communities closer to SMSA's.

The sex composition of the rural-farm and rural-nonfarm populations

As indicated previously in this chapter, the sex composition of a given population is determined by antecedent births, deaths, and migration. Demographers often use a simple index, the sex ratio, or the number of males per 100 females, to summarize and compare the balance of the sexes in a population. The sex ratio at birth is high. That is, among whites in the United States, 5 or 6 percent more males than females are born; among nonwhites, the excess of males is only 2 or 3 percent. The death rate, from infancy throughout the lifespan, is higher for males than females. Thus, the effect of mortality is to continuously reduce the high sex ratio at birth. In addition, the age and sex selectivity of in- and out-migrants greatly affects sex composition,[8] variations in the residence components generally being due more to the nature of the selectivity among migrants than to births and deaths.

The sex ratio of the total population of the United States in 1960 was 96.9 males per 100 females. That is, there were approximately 3 percent more females than males. For many years prior to 1950, the sex ratio of the American population had been more than 100. Among whites in 1960, it was 97.3 and among nonwhites, 94.2.

As shown in table III-7 the ratio of males to females was higher in the rural than in the urban areas of the Nation as a whole. The excess of males over females in the rural-farm population was slightly over 7 percent, in the rural-nonfarm population it was about 3 percent; in the urban population on the other hand there was a male deficit of about 6 percent. The sex ratios for nonwhites were considerably lower than for whites. Although the nonwhite sex ratios follow the high rural and low urban pattern mentioned, they were higher in the rural-nonfarm than in the rural-farm areas of the Nation.

The high sex ratios characteristic of the two rural-residence groups and the low sex ratios of urban areas for both whites and nonwhites applied generally to the nine divisions as well as the four regions of the Nation, with a few exceptions. In the rural-farm population, the only sex ratio below 100 was that of nonwhites in New England. In the rural-nonfarm population, it fell below 100 only for nonwhites in the South as a whole and in the East and West South Central Division. For the urban population the ratio exceeded 100 only among nonwhites in the West and in the Pacific Division.

The prevailing pattern of the sex ratios of the white population is that this measure is highest in the rural-farm population, lower in the rural-nonfarm, and lowest in the urban. This was so in all regions except the West, and in all divisions except the South Atlantic and the Pacific; the white rural-nonfarm sex ratio was trivially higher than that of the rural-farm population in two of these areas, and appreciably larger in one, the Pacific Division. On the other hand, the prevailing pattern of the nonwhite sex ratio is that the measure is highest in the rural-nonfarm population, lower in the rural-farm, and lowest in the urban. The main exception to this pattern is found in the South, where the nonwhite sex ratios for the region and each of the three southern divisions follows the pattern characteristic of the white sex ratio. Also, in the New England Division, the nonwhite urban sex ratio is actually higher than that of the rural-farm population but far lower than in the rural-nonfarm population.

Table III-7.—SEX RATIOS BY RESIDENCE AND COLOR, BY REGIONS AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Males per 100 females											
	Total			Rural farm			Rural nonfarm			Urban		
	Total	White	Non-white	Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
United States	96.9	97.3	94.2	107.2	108.0	101.6	103.1	103.1	102.3	94.0	94.3	91.3
Regions:												
Northeast	94.6	94.9	91.0	109.0	109.0	113.4	100.9	100.5	122.6	92.9	93.2	89.7
North Central	97.4	97.6	94.7	109.6	109.6	103.3	101.8	101.4	125.9	94.3	94.5	93.2
South	96.9	97.9	93.5	104.1	105.1	101.2	102.3	103.2	98.7	93.0	93.9	89.4
West	100.0	99.7	103.9	110.7	110.8	108.7	112.5	111.9	124.1	96.8	96.5	100.3
Divisions:												
New England	95.0	94.9	97.9	110.0	110.1	78.5	101.1	100.8	135.2	93.0	93.0	95.1
Middle Atlantic	94.5	94.7	90.4	108.7	108.7	117.1	100.8	100.4	120.5	92.9	93.3	89.1
East North Central	97.2	97.5	94.6	108.0	108.0	103.2	102.1	101.7	133.8	95.0	95.1	93.4
West North Central	97.7	97.8	95.1	111.1	111.2	103.4	101.3	101.0	115.7	92.5	92.6	92.1
South Atlantic	97.0	97.8	94.3	102.8	103.5	101.2	103.1	103.9	100.2	92.7	93.3	90.0
East South Central	96.2	97.5	91.8	103.9	104.9	100.8	100.5	101.6	95.5	90.8	92.1	86.9
West South Central	97.3	98.2	93.4	106.6	107.4	102.3	102.5	103.5	98.6	94.5	95.3	90.3
Mountain	101.1	101.1	101.9	111.0	111.7	101.8	108.9	109.2	106.2	97.3	97.2	97.7
Pacific	99.8	99.2	104.4	110.3	110.0	119.5	114.6	113.3	151.7	96.6	96.3	100.6

Source: Retabulated and computed from data in 1960 Census of Population.

Among rural-farm whites, sex ratios were highest in the Mountain and West North Central Divisions (111.7 and 111.2, respectively) and lowest in the South Atlantic and East South Central Divisions (103.5 and 104.9, respectively). Among rural-nonfarm whites, sex ratios ranged from a high of 113.3 in the Pacific Division to a low of 100.4 in the Middle Atlantic Division. In the urban white population, the range of the sex ratio was relatively narrow, from 97.2 in the Mountain Division to 92.1 in the East South Central Division. Among nonwhites in each of the residence categories, sex ratios varied widely, except in the three southern divisions where nonwhite sex ratios, within each residence group, fell within a relatively narrow range.

Sex ratios for 5-year-age groups in the three residence categories of the Nation, by color, are summarized in figure III-9. A number of reasons may be adduced to account for patterns in the sex ratio by age for the several color-residence groups of the population. Among the most important are the following: (1) due to the high sex ratio at birth, the sex ratios at the early ages tend to be

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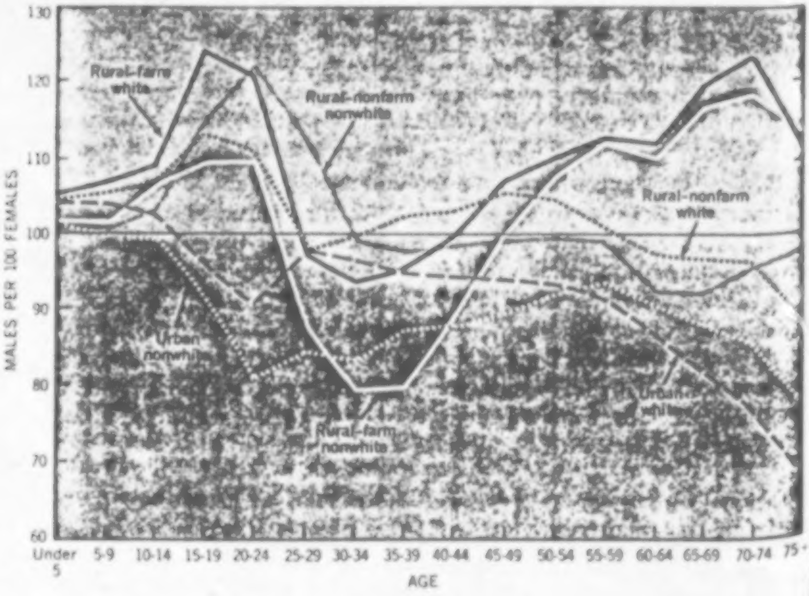
high; (2) due to higher male than female mortality at most ages, sex ratios at the older ages tend to be low; (3) due to patterns of selective migration which reflect numerous social and economic norms, distinctive patterns of high and low sex ratios emerge in the three residence categories; and (4) due to the lower sex ratio at birth as well as higher mortality among nonwhites, the sex ratios of nonwhites tend to remain lower throughout the lifespan.

A high level of masculinity is discernible in the rural-farm population, both white and nonwhite. The sex ratios plotted in figure III–9 are above 100 for all age groups below 25 years, all age groups of the white population 45 years old and over, and all age groups of the nonwhite population 50 years and over. Moreover, except at ages 75 and over, the sex ratios for the rural-farm white population exceeded those for the nonwhite population.

The high degree of masculinity in the rural-farm population reflects not only the impact of the factors set forth above as influences on the sex ratio, but also a series of social and economic norms. With few exceptions, agricultural work in American society is defined as man's work. Hence, hired hands and farm laborers are predominantly males. Farming and ranching are believed to require the cooperation of a married couple, and the proportion of married adults with

Figure **III–9**.—Sex Ratios of Population by Residence, Color, and Age, for the Conterminous United States: 1960



Source: Appendix table A–11.

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the husband engaged in agriculture is high. In these cases, there are few roles to be played by young unmarried girls or by widowed women. Hence, there appears to be a strong tendency for them to migrate from the rural-farm population.*

In the rural-nonfarm population the balance of the sexes is far closer to equality than in either the rural-farm or urban population. For the white population the rural-nonfarm sex ratios are closer to 100 than those of the rural-farm population in 16 of the 17 age groups plotted in figure III-9, and for the nonwhite population this was true in 13 of the 17 age groups. Also, the white rural-nonfarm sex ratios were closer to 100 than were those of either the rural-farm or rural-nonfarm populations in 12 age groups, and the nonwhite ratios were closer to balance in 10 age groups. Also, although the rural-nonfarm population is to be characterized as masculine by virtue of overall sex ratios of 103.1 for whites and 102.3 for nonwhites, it was considerably less masculine than the rural-farm population in most age groups. In fact, between ages 25 and 34 and at age 60 and above, women outnumbered men in the white rural-nonfarm population, but the excess of women in these age groups was proportionately less than the excess of men in the corresponding age groups of the rural-farm population. The same is true of the nonwhite population 30 years old and over, except in the age group 45 to 49 years.

A quite different situation prevailed in the urban population, which had far more females than males in almost all age groups. The sex ratio for the white urban population exceeded 100 only in the age groups under 15 years, and for the nonwhite population only among children under 5 years. The influx to urban areas of young women aged 20 to 24 years from the rural areas was especially marked, and is reflected by an urban sex ratio of 90 for the white and 81 for the nonwhite population. The extraordinarily low sex ratios in the urban population at the more advanced ages not only reflect differential mortality, but also the urban residence of widows from the rural areas.

The sex composition of the rural-farm and rural-nonfarm populations, by distance

While the populations of the three urban-rural residence categories are interdependent in numerous ways, the metropolis or the SMSA is dominant in the sense of guiding, directing, and controlling a preponderance of human activities. Given the free movement of population characteristic of American society, as well as the established patterns of migration mainly from rural to urban sectors, sex ratios are expected to fluctuate in a systematic way with increased distance from an SMSA. It is anticipated that the rural population, for example, will be increasingly masculine as distance from an SMSA increases. Such an expectation is based, in part, upon the fact that the urban population will be proportionately smaller with increasing distance from SMSA's. As a consequence, the "rural" character of the population will increase and it will thus be more masculine.

For the United States as a whole, the sex ratios of both the white and nonwhit populations are lower in SMSA's than they are at any distance away fro SMSA's. In general, the further the distance, the higher the sex ratio. Th only exception to this pattern is found for the nonwhite population residin from 50 to 99 miles away from an SMSA. (Table III-8).

Table III-8.—SEX RATIOS BY RESIDENCE, COLOR, AND DISTANCE FRO NEAREST STANDARD METROPOLITAN STATISTICAL AREA, FOR THE CON TERMINOUS UNITED STATES: 1960

Residence and color	Total	Inside SMSA counties	Distance from nearest SMSA[1]			
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 miles or more
United States	96.9	95.6	98.3	98.8	101.1	106.2
White	97.3	95.9	98.5	99.3	101.4	106.1
Nonwhite	94.2	93.0	96.5	95.5	98.1	106.4
Rural farm	107.2	107.2	106.1	106.5	109.5	112.
White	108.0	107.5	106.5	107.5	110.4	112.
Nonwhite	101.6	103.0	102.9	101.2	100.7	101.
Rural nonfarm	103.1	106.0	100.6	101.4	104.2	106.
White	103.1	105.4	100.7	101.8	104.5	107.
Nonwhite	102.3	115.5	99.5	99.0	100.6	106.5
Urban	94.0	94.2	92.8	92.3	94.1	98.4
White	94.3	94.6	93.1	92.9	94.2	98.1
Nonwhite	91.3	91.7	90.1	88.1	92.4	118.5

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

A somewhat different pattern characterizes the sex ratios of the rural-farm and rural-nonfarm population. In these residence categories high sex ratios are found in SMSA's, and they get smaller as the distance from an SMSA grows larger, but only up to a point. In every case there is a reversal of trend which culminates in maximal sex ratios at 150 miles or more from an SMSA. The turning point is reached at less than 50 miles in the total and white rural-farm populations and in the total and white rural-nonfarm populations. It occurs at 50 to 99 miles in the urban population, both white and nonwhite, and in the nonwhite rural-nonfarm population. In the nonwhite rural-farm population the sex ratio declines through all distance ranges short of 150 miles, at which point it begins to rise.

With one exception among southern nonwhites, sex ratios in the rural-farm population of all regions and at all distances are above 100. An excess of males also prevails in the white rural-nonfarm population in most distance bands, but the sex ratios are generally lower than those of the rural-farm white population in the same distance bands. The extremely high rural-nonfarm nonwhite sex ratio of 115.5 in SMSA counties merits special notice. Sex ratios for the white and nonwhite urban populations are characteristically low and relatively stable at all distances.

Sex ratios of the rural-farm white population in the four regions usuall exhibited an increase with greater distance, as shown in table III-9. The whit rural-nonfarm sex ratio in the four regions generally shows higher-than-average ratios in the SMSA counties, lower-than-average ratios within 100 miles of the SMSA counties, and higher-than-average ratios in the most distant areas. The urban white sex ratios as a rule appear to be higher than average in SMSA counties and at distances of 150 or more miles from an SMSA. In general, nonwhite sex ratios in the South for all residence groups appear to decline with increasing distance from an SMSA.

Table III-9.—SEX RATIOS FOR THE TOTAL WHITE POPULATION AND THE NONWHITE POPULATION OF THE SOUTH, BY RESIDENCE, DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, AND REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region by residence and color	Total	Inside SMSA counties	Distance from nearest SMSA[1]			
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 miles or more
Northeast						
Total white	94.9	94.3	97.3	96.8	98.6	103.4
Rural farm	109.0	107.0	109.2	109.7	113.3	114.0
Rural nonfarm	100.5	100.7	100.2	99.6	101.3	105.2
Urban	93.2	93.3	93.5	90.8	91.7	99.2
North Central						
Total white	97.6	96.1	98.8	99.5	99.9	103.4
Rural farm	109.6	108.2	107.2	110.0	112.3	113.3
Rural nonfarm	101.4	103.3	100.6	100.9	99.6	103.4
Urban	94.5	95.1	93.1	91.7	92.3	98.2
South						
Total white	97.9	96.4	98.7	99.2	100.7	101.3
Rural farm	105.1	105.5	104.9	105.1	105.4	108.9
Rural nonfarm	103.2	108.2	101.0	101.9	104.9	96.8
Urban	93.9	94.4	92.1	93.2	91.8	100.9
Total nonwhite	93.5	92.1	95.1	94.6	94.4	(2)
Rural farm	101.2	100.5	102.7	101.0	99.8	(2)
Rural nonfarm	98.7	107.3	97.4	97.3	95.9	(2)
Urban	89.4	90.4	87.3	87.2	86.5	(2)
West						
Total white	99.7	98.1	101.7	102.7	104.7	104.8
Rural farm	110.8	109.2	113.0	109.9	111.4	112.2
Rural nonfarm	111.9	117.6	104.6	106.7	111.9	109.7
Urban	96.5	98.2	98.5	97.3	98.0	98.7

[1] For explanation of measurement procedure, see chapter I, page 17.
[2] Fewer than 100 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Recent changes in rural-farm and rural-nonfarm age and sex composition

As much has been written about long-time trends in age structure and sex composition in America,[10] it is unnecessary here to be concerned with more than a brief indication of major changes in the latest intercensal decade.

It is obvious that the changes in definitions of residence used in 1950 and 1960 render a careful and detailed scrutiny of age and sex changes in the decade hazardous, if not impossible. A joint report of the Bureau of the Census and the

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Agricultural Marketing Service on the effects of changes in the definitions of the farm populations is helpful in evaluating the data presented by residence for 1950 and 1960. This report states with respect to changes in age and sex:

> Although there were some differences in the amounts by which the various age groups were affected by the change in definition, the age structure of the farm population was not greatly altered. The median age of the farm population is 26.4 under the 1960 definition and 26.2 under the previous definition. The relatively unchanged median does mask the fact that the proportions of children under 14 years of age and of elderly people 65 years old and over in the farm population are both somewhat reduced by the change in definition. The number of children under 14 is reduced by 22 percent and that of persons 65 and over by 27 percent under the 1960 definition in comparison with the estimates obtained for these ages, using the 1950 definition. . . .
>
> The ratio of males to females in the population group shifted to the nonfarm category is only 102.1, considerably lower than the ratio of 109.3 of the new farm population which shows the traditional farm preponderance of males. Such a change was to be expected in view of the essentially nonagricultural character of the group deleted from the farm population.[11]

Table III–10 summarizes changes in selected measures of age composition for 1950 and 1960. A change in the definition of the farm population adopted for the census of 1960, which has been alluded to above, introduced some elements of incomparability in data tabulated by farm residence. The definition of urban and rural territory is unaffected by this change. Hence, comparisons for the total, the urban, and the rural populations as a whole are also unaffected.

The median age of the American population as a whole declined between 1950 and 1960, from 30.2 to 29.5 years. A decline in median age took place in all residence and color groups except rural-farm whites. The large increase in the median age of this group was sufficient to offset the decrease in median age for rural-farm nonwhites, so that the total rural-farm population attained a large increase in median age during the decade.

Both youth and aged dependency ratios were larger in 1960 than in 1950. Increases in youth dependency loads during the decade were greatest in the urban and least in the rural-farm population. Increases in aged dependency loads, on the other hand, were greatest in the rural-farm population and least in the rural-nonfarm population. Among whites, however, the increase was least in the rural-nonfarm population and among nonwhites, was least in the rural-farm residence category.

The general pattern of change in age distribution for both whites and nonwhites is one of increase among youth and older adults, and decrease among young adults. White children under 5 years old, however, comprised a smaller proportion of the population in 1960 than in 1950 in both the rural-farm and rural-nonfarm populations. The proportion of persons 45 to 64 years old was slightly smaller in 1960 than in 1950 in the urban population for both whites

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and nonwhites. In all residence groups, the proportions of whites and nonwhites aged 20 to 24 years and 25 to 44 years were markedly smaller in 1960 than in 1950. Nonwhite children under 5 years formed a larger proportion of the population in 1950 than in 1960 only in the rural-farm residence category.

Table III-10.—SELECTED MEASURES OF AGE AND SEX COMPOSITION OF THE POPULATION, BY RESIDENCE AND COLOR, FOR THE CONTERMINOUS UNITED STATES: 1960 AND 1950

[For current and previous urban definitions and changes in definition of the farm population between 1950 and 1960, see text]

Selected measures	Total		Rural farm		Rural nonfarm		Urban	
	1960	1950	1960	1950	1960	1950	1960	1950
MEDIAN AGE								
Total	29,5	30,2	29,6	26,3	26,8	27,9	30,3	31,6
White	30,3	30,8	31,7	27,9	27,5	28,4	31,0	32,0
Nonwhite	23,5	26,1	17,4	18,5	20,0	23,5	25,3	28,7
YOUTH DEPENDENCY RATIO								
Total	73,4	58,5	86,2	84,7	84,5	70,5	68,9	50,0
White	71,1	56,9	79,9	78,8	81,5	68,8	67,0	49,3
Nonwhite	93,7	73,5	148,8	128,7	117,6	89,5	84,0	56,9
AGED DEPENDENCY RATIO								
Total	17,3	14,2	19,2	15,2	18,1	16,1	16,9	13,2
White	17,8	14,4	19,5	15,3	18,2	16,2	17,6	13,8
Nonwhite	12,6	10,5	16,4	14,2	17,5	14,6	11,2	8,6
PERCENT DISTRIBUTION BY AGE								
Total white	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Under 5 years	10,9	10,5	9,3	10,7	11,8	11,9	10,8	10,0
5 to 14 years	19,4	15,8	21,7	20,9	21,2	17,9	18,5	13,9
15 to 19 years	7,3	6,9	9,1	8,9	7,8	7,3	7,0	6,3
20 to 24 years	6,0	7,5	4,2	6,0	6,1	7,5	6,1	7,9
25 to 44 years	26,3	30,1	21,7	25,2	25,6	28,8	27,0	31,6
45 to 64 years	20,7	20,9	24,3	20,4	18,5	17,9	21,1	21,8
65 years and over	9,4	8,5	9,8	7,8	9,1	8,8	9,5	8,5
Total nonwhite	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Under 5 years	14,5	12,6	14,8	15,0	14,8	13,8	14,3	11,4
5 to 14 years	22,6	19,2	29,6	27,1	25,7	21,2	21,7	16,0
15 to 19 years	8,4	8,2	11,7	10,9	9,5	8,9	7,0	7,0
20 to 24 years	6,5	8,3	5,4	6,9	6,5	8,6	6,6	8,6
25 to 44 years	25,2	29,7	16,5	20,5	20,8	25,8	27,3	34,0
45 to 64 years	16,8	16,4	15,8	13,7	15,2	14,5	17,3	17,8
65 years and over	6,1	5,7	6,2	5,8	7,5	7,2	5,8	5,1
SEX RATIO								
Total	96,9	98,6	107,2	110,1	103,1	103,6	94,0	94,6
White	97,3	99,0	108,0	111,4	103,1	103,6	94,3	94,9
Nonwhite	94,2	95,7	101,6	102,7	102,3	102,7	91,3	91,6

Source: 1960 data based on tables III-1, III-2, III-3, and III-7; for 1950, Census of Population, 1950, Vol. II, *Characteristics of the Population*, Part 1, United States Summary, tables 36 and 38.

Sex ratios in each residence category, for both whites and nonwhites, declined during the past decade. The magnitude of the decline, at least partly due to definitional changes, was greatest in the rural-farm population. For whites, the decline in the sex ratios in the past decade was less in the rural-nonfarm than in the urban residence category.

Summary

The rural population of the United States in 1960 differs markedly from the urban population in age and sex composition. The rural-farm age structure for whites and nonwhites presents a picture of high proportions of youth and of older adults, and low proportions of young adults. At most points in this generalized picture, these characteristics are reversed in the urban population. The age characteristics of the rural-nonfarm population are usually intermediate, except for the high proportion of children under 5 years and the low proportion of the elderly. Sex ratios for the rural-farm population are characteristically high and those for the urban population typically low.

Youth dependency among whites is greatest in the rural-nonfarm population and lowest in the urban. White rural-farm and rural-nonfarm youth dependency loads do not differ greatly in magnitude. Among nonwhites, youth dependency loads are highest in the rural-farm and lowest in the urban population, but very high in both rural residence categories. In the white population, aged dependency ratios are highest in the rural-farm and lowest in the urban population; among nonwhites, they are greatest in the rural-nonfarm and lowest in the urban population.

In general, proportions in the younger ages in the rural population exhibit increases as the distance from an SMSA increases, and the proportions at older ages show decreases. Youth dependency ratios for both segments of the rural population tend to be larger as the distance from an SMSA increases, while aged dependency ratios tend to be smaller. Sex ratios for the rural-farm white population also tend to increase with distance from the nearest SMSA. In relatively few instances is the influence of the metropolis found to be linear.

NOTES

[1] See the discussion of the demographic study of age composition in Donald J. Bogue, *The Population of the United States* (Glencoe: The Free Press, 1959), pp. 92–95; Ansley J. Coale, "The Effects of Changes in Mortality and Fertility on Age Composition," *The Milbank Memorial Fund Quarterly*, vol. XXXIV, No. 1, January 1956, pp. 79–114; and George J. Stolnitz, "Mortality Declines and Age Distribution," *The Milbank Memorial Fund Quarterly*, vol. XXXIV, No. 2, April 1956, pp. 1–38.

[2] T. Lynn Smith, *Fundamentals of Population Study* (Philadelphia: J. B. Lippincott Company, 1960), pp. 170–175; Charles P. Loomis and J. Allan Beegle, *Rural Sociology:*

NOTES—Continued BEST COPY AVAILABLE

The Strategy of Change (Englewood Cliffs: Prentice-Hall, Inc., 1957), pp. 69–81; and Bogue, *op. cit.*, pp. 99–101.

The precise delineation of life-cycle stages must necessarily be somewhat arbitrary. Bogue, for example, utilizes four major life-cycle stages, each of which is subclassified. These are *Childhood* (infancy, under 1; early childhood, 1 to 5; and late childhood, 6 to 8), *Youth* (pre-adolescence, 9 to 11; early adolescence, 12 to 14; and late adolescence, 15 to 17), *Adulthood* (early maturity, 18 to 24; maturity, 21 to 44; and middle age, 45 to 64), *Old Age* (early old age, 65 to 74, and advanced old age, 75 and over). See Bogue, *op cit.*, p. 96ff.

The specified residence patterns apply to the various age groups as follows:

Percent under 5 years: The specified pattern is true for whites in all regions and in all except three divisions (Middle Atlantic, West North Central, and West South Central); the specified pattern for nonwhites is not found at any regional or divisional level. The most frequent pattern for nonwhites is rural nonfarm (high), rural farm (intermediate), and urban (low). This pattern is found in the South and West and in three of the five divisions where rural nonwhites are well represented.

Percent 5 to 14: The specified pattern is true for whites in all regions and divisions except the South. It is also true for nonwhites except in the North Central Region and in the New England, East North Central, and Pacific divisions.

Percent 15 to 19: The specified pattern is true for whites in all regions and in all divisions except for ties in the New England and West North Central divisions; it is also true for nonwhites except in the Northeast and in Middle Atlantic, West North Central, and Pacific divisions.

Percent 20 to 24: The specified pattern is true for whites in all regions except the West and in all divisions except the South Atlantic and Pacific; it is also true for nonwhites only in the South as a whole and in each division of the South.

Percent 25 to 44: The specified pattern is true for whites in all regions except the Northeast where the urban and rural-nonfarm percentages are identical, and in all divisions except New England; it is also true for nonwhites in all regions and divisions except New England.

Percent 45 to 64: The specified pattern is true for whites in all regions except the Northeast and in all divisions except the Middle Atlantic and West South Central; it is also true for nonwhites in the Northeast and North Central regions but in no division where nonwhites are numerous except the West South Central. Among nonwhites, the pattern for the South and West regions is urban (high), rural farm (intermediate), and rural nonfarm (low).

Percent 65 and over: The specified pattern is true for whites except in the North Central and West regions and in the West North Central, West South Central, Mountain, and Pacific divisions; it is not true for nonwhites in any region or division. The nonwhite pattern in the South and in the South Atlantic and East South Central divisions is rural nonfarm (high), urban (intermediate), and rural farm (low).

The "dependency ratios" as used here are identical with the definitions used by Bogue, *op. cit.*, p. 101ff.

It should be recalled that one of the major objectives of this study is a comparison of the characteristics of the gross residence categories. We are asking to what extent these categories are similar in all parts of the Nation and to what extent they are different from each other. The design employed recognizes size of place only in a gross way. See the compelling results obtained for age differences according to size of place by Otis Dudley Duncan and Albert J. Reiss, *Social Characteristics of Urban and Rural Communities, 1950* (New York: John Wiley and Sons, Inc., 1956), chapter 3.

NOTES—Continued

[7] Duncan and Reiss, *ibid.*, p. 41.

[8] See the excellent discussion of factors determining the sex ratio in Bogue, *op. cit.*, pp. 154–158. Of special note is the probable undercount of young men between the ages of 20 and 35. See also T. Lynn Smith, ***Fundamentals of Population***, *op. cit.*, chapter 7; T. Lynn Smith, *Population Analysis* (New York: McGraw-Hill Book Company, Inc., 1948), chapter 5; C. A. McMahan, "An Empirical Test of Three Hypotheses Concerning the Human Sex Ratio at Birth in the United States, 1915–1948," *Milbank Memorial Fund Quarterly*, vol. XXIX, No. 3, July 1951; and Robert J. Myers, "The Effect of Age of Mother and Birth Order on Sex Ratio at Birth," *Milbank Memorial Fund Quarterly*, vol. XXXII, No. 3, July 1954.

[9] Bogue, *op. cit.*, p. 160, suggests the hypothesis that families with young boys are more likely to reside in suburban areas and small towns, in preference to cities, than are families with young girls.

[10] Bogue, *op. cit.*, chapter 6; Smith, *Fundamentals of Population Study, op. cit.*, pp. 177–179; Conrad Taeuber and Irene B. Taeuber, *The Changing Population of the United States* (New York: John Wiley and Sons, Inc., 1958) chapter 2; Henry D. Sheldon, *The Older Population of the United States* (New York: John Wiley and Sons, Inc., 1958); "USA Population Changes: 1950–60," *Population Bulletin*, vol. XIX, No. 2, March 1963; and Philip M. Hauser and Raul Vargus, "Population Structure and Trends" in E. W. Burgess, *Aging in Western Societies* (Chicago: The University of Chicago Press, 1960).

[11] "Effect of Definition Changes on Size and Composition of the Rural-Farm Population: April 1960 and 1959," Census–AMS, Series P–27, No. 28 (Washington, D.C.: Bureau of the Census, April 17, 1961), pp. 4 and 5.

CHAPTER IV

DIFFERENTIAL FERTILITY

Introduction

The patterns and differentials in fertility of the rural population of the United States in 1960 are discussed in this chapter. The rural-urban difference in fertility has been studied extensively and is well documented scientifically. Grabill summarizes present knowledge and speculates about the future of this differential as follows:

> The urban-rural differentials in fertility are among the oldest and best known of demographic phenomenon. Over the years, they have narrowed considerably in the United States but they are not likely to disappear completely within the foreseeable future. They arise from many causes. The main cause probably is the greater money cost and inconvenience of raising children in an urban area than on a farm. Some other causes are the migration of unmarried women from rural to urban areas, later marriage and more education in urban areas, and more incentive to practice birth control in urban areas. It is true that the factors are differences in degree. It is doubtful that the tendency to limit family size spread from urban areas to rural areas only as the latter became more "urban minded."[1]

In addition to these causes, Peterson suggests that urban women are more likely to find alternative roles to that of housewife and thus to postpone childbearing or put it off altogether.[2]

While the rural-urban fertility differential is well established, size of family and income are usually negatively correlated in both rural and urban areas.[3] Furthermore, the populations classified as rural-farm, rural-nonfarm, and urban are increasingly homogeneous in many ways. Also, it must be recalled that the rural-farm residence category in particular underwent a major definition change in 1960.

This chapter employs only one of a number of useful measures of fertility, namely, the number of children ever born per 1,000 ever-married women.[4] This measure is computed separately for married women in the early phase of childbearing (ages 15 to 24), in the middle period (25 to 34), and in the late phase (35 to 44). Generally, these measures are computed for white women in various areas and for nonwhite women only in the South, since nonwhites comprise a small proportion of the rural population elsewhere. The computation of fertility for restricted age groups of women within the reproductive span helps to eliminate the influence of differing age concentrations of women on fertility levels. Much of the discussion to follow centers upon the ratio for women 35 to 44, a group for which childbearing is nearly complete. This cohort of women

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was born between 1915 and 1925 and grew up under more rural conditions than later cohorts. At the same time, women who were 35 to 44 years old in 1960 were bearing a large proportion of their children between 1935 and 1945, a period in which birth rates in the United States were comparatively low.

The measure employed must be recognized for what it is. The question regarding children ever born was asked only of women reported as having been married. It is highly probable that many unwed mothers reported themselves as having been married, therefore, and reported illegitimate children. Nevertheless, the data are probably less complete for illegitimate than for legitimate births. Enumerators' instructions were intended to include children born to women before their present marriage, children no longer living, and those away from home, as well as children who were still living at home. Grabill asserts that while overcounts of children ever born may occur almost as frequently as undercounts, ". . . it is probable that the bulk of the reports on children ever born are complete and accurate, at least for whites." [8]

This chapter seeks to answer the following questions: To what extent is the rural-urban differential in fertility evident in 1960? Do all regions and divisions of the Nation exhibit similar differentials? Are the differentials similar for whites and nonwhites? And finally, to what extent are rural fertility levels influenced by proximity to metropolitan areas?

Patterns of fertility by residence

The rural-urban fertility differentials for the conterminous United States were still relatively large in 1960 (fig. IV–1). Rural white women in each of the three age groups reported more children than urban white women. The number of children ever born per 1,000 ever-married rural-farm white women in the Nation as a whole was from 3 to 12 percent above that for rural-nonfarm white women and from 20 to 35 percent above that for urban white women. The ratio for rural-nonfarm white women ranged from 14 to 21 percent abov that for urban white women.

Ratios of children ever born per 1,000 ever-married white women, in all three age groups, differed less in the two rural residence groups (rural-farm or rural-nonfarm) than either rural residence group did in relation to the urban group. For white women between 35 and 44, for example, the difference between rural-farm and rural-nonfarm ratios was 359; between rural-farm and urban i was 854; and between rural-nonfarm and urban it was 495.

Regional differences. All regions without exception exhibited the same fertility pattern as the Nation—high rural-farm, intermediate rural-nonfarm, and low urban. Except for the Northeast, the ratios of children ever born to ever-married white women differed less in the two rural residence groups than either rural group did from the urban. The greater similarity of rural-nonfarm to urban ratios in the Northeast applies only to married women 25 to 34 and 35 to 4 (table IV–1).

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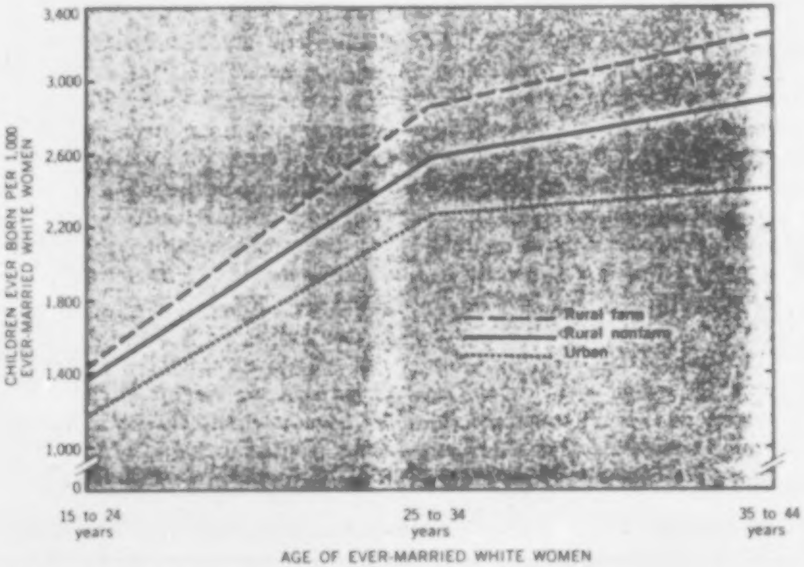
Table IV-1.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN (AND NONWHITE WOMEN IN THE SOUTH) BY AGE OF WOMEN AND RESIDENCE, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and color	Children ever born per 1,000 ever-married women								
	Rural farm			Rural nonfarm			Urban		
	15 to 24 years	25 to 34 years	35 to 44 years	15 to 24 years	25 to 34 years	35 to 44 years	15 to 24 years	25 to 34 years	35 to 44 years
United States	1,405	2,867	3,262	1,370	2,590	2,903	1,175	2,269	2,408
Northeast	1,429	2,850	3,221	1,332	2,444	2,674	1,099	2,124	2,320
North Central	1,445	2,957	3,274	1,416	2,697	2,969	1,210	2,373	2,507
South:									
White	1,325	2,708	3,265	1,320	2,538	2,992	1,146	2,241	2,393
Nonwhite	2,093	4,525	5,665	2,058	3,870	4,432	1,835	2,976	2,921
West	1,551	3,013	3,229	1,489	2,773	2,960	1,252	2,363	2,421

Source: Retabulated and computed from data in 1960 Census of Population.

Figure IV-1.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN, BY RESIDENCE AND AGE, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Table IV-1.

Levels of fertility for white women in each of the residence groups and in each age group were generally higher in the West and North Central Regions than in the Northeast and the South. Ratios for nonwhite women in the South were much above those for white women in each age and residence group.

Ratios of children ever born to ever-married rural-farm white women generally are highest in the West and North Central Regions and lowest in the Northeast and the South. The ratio of children born to rural-farm white women aged 15 to 24 ranged from a high of 1,551 in the West to a low of 1,325 in the South; for those aged 25 to 34, the range was from a high of 3,013 in the West to a low of 2,708 in the South; and for rural-farm women aged 35 to 44, the number ranged from a high of 3,274 in the North Central Region to 3,221 in the Northeast. While regional differences in fertility among rural-farm white women were marked at ages from 15 to 24 and 25 to 34, they were very small for women at ages 35 to 44.

The regional fertility pattern for rural-nonfarm white women is similar to that for rural-farm white women, the most striking difference is in the case of rural-nonfarm white women aged 35 to 44. Ratios of children to these women differed markedly between the regions, from a high of 2,992 in the South to a low of 2,674 in the Northeast.

The ratios of children ever born to ever-married urban white women of all ages were highest in the West and North Central States, intermediate in the South, and lowest in the Northeast.

The magnitude of the fertility differential between rural-farm and urban residence categories varied from region to region, generally differing most in the Northeast and least in the South. The fertility ratio for rural-farm white women aged 15 to 24 in the Northeast is 30 percent higher than the urban ratio while in the South it is only 16 percent higher. For rural-farm white women aged 25 to 34 in the Northeast, the ratio is 34 percent higher than the urban ratio and in the South it is only 21 percent higher. For rural-farm white women aged 35 to 44 in the Northeast the ratio is 39 percent higher than the urban ratio, and in the North Central it is 31 percent higher. The comparable figure for the South is 36 percent.

Differentials between the rural-nonfarm and urban categories varied less between the regions than the differentials between the rural-farm and urban categories. For white women, the difference between rural-nonfarm and urban categories was—greatest in the Northeast and least in the South for those aged 15 to 24; greatest in the West and least in the South for ages 25 to 34; greatest in the South and least in the Northeast for those aged 35 to 44.

The differences between rural-farm and rural-nonfarm categories for all three age groups of white women were greatest in the Northeast. Depending upon the age group of the women, the ratio of children ever born to ever-married white women in the Northeast ranged from 7 to 20 percent higher in the rural-farm than in the rural-nonfarm areas. The ratio in the South for rural-farm white women aged 15 to 24 was less than 1 percent higher than for the rural-nonfarm group (in the Northeast it was 7 percent above) the rural-farm ratio for women 25 to 34 in the South was only 7 percent above that for rural-nonfarm women (in the Northeast, 17 percent above); and finally the rural-farm ratio for women 35 to 44 in the West and South was 9 percent above the corresponding rural-nonfarm ratio (compared with 20 percent above in the Northeast).

Divisional differences. With few exceptions, the pattern of high rural-farm, intermediate rural-nonfarm, and low urban fertility was repeated for each of the nine divisions of the conterminous United States in 1960 (see table IV–2). The exceptions in the expected pattern were all instances in which the number of children ever born to ever-married rural-nonfarm white women either equaled or exceeded the number of children born to rural-farm white women. Such exceptions occur in the case of white women in the East North Central, South Atlantic, and East South Central Divisions, and in the case of nonwhite women in the South Atlantic Division. In all instances the difference in ratios amounted to less than 3 percent.

Table IV–2.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN (AND NONWHITE WOMEN IN THE SOUTH) BY AGE OF WOMEN AND RESIDENCE, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division and color	Children ever born per 1,000 ever-married women								
	Rural farm			Rural nonfarm			Urban		
	15 to 24 years	25 to 34 years	35 to 44 years	15 to 24 years	25 to 34 years	35 to 44 years	15 to 24 years	25 to 34 years	35 to 44 years
WHITE									
New England	1,506	2,995	3,266	1,328	2,486	2,696	1,156	2,260	2,481
Middle Atlantic	1,412	2,836	3,211	1,334	2,428	2,665	1,080	2,084	2,273
East North Central	1,430	2,937	3,253	1,430	2,673	2,915	1,213	2,354	2,484
West North Central	1,458	2,973	3,293	1,383	2,756	3,031	1,203	2,425	2,578
South Atlantic	1,239	2,598	3,208	1,269	2,428	2,856	1,083	2,122	2,278
East South Central	1,295	2,687	3,360	1,331	2,585	3,183	1,119	2,186	2,401
West South Central	1,485	2,866	3,223	1,429	2,756	3,116	1,224	2,400	2,537
Mountain	1,580	3,127	3,473	1,526	2,906	3,251	1,310	2,580	2,760
Pacific	1,520	2,906	3,023	1,469	2,703	2,821	1,233	2,298	2,330
NONWHITE									
South Atlantic	2,022	4,288	5,462	2,035	3,703	4,225	1,823	2,871	2,772
East South Central	2,119	4,804	5,823	2,088	4,103	4,698	1,886	3,166	3,128
West South Central	2,213	4,696	5,977	2,085	4,075	4,710	1,823	3,038	3,056

Source: Retabulated and computed from data in 1960 Census of Population.

The ratios of children ever born to ever-married white women differed less between the two rural residence groups than either rural residence group differed from the urban. Exceptions to this generalization are found only in the New England and Middle Atlantic Divisions. In New England the numbers of children born to rural-nonfarm white women aged 25 to 34 and 35 to 44 departed less from the urban than rural-farm ratios. In the Middle Atlantic Division, a similar condition was true only for white women 35 to 44 years old.

Ratios of children born to ever-married white women were higher in the Mountain Division for all age and residence groups than in any other division of the Nation. They were generally lowest in most age and residence groups in the Middle Atlantic or South Atlantic Divisions. Comparable ratios for nonwhite women in each of the southern divisions shown in table IV–2 were usually about one-third higher than those for white women.

Fertility levels of rural-farm white women at different ages exhibited important differences. As mentioned previously, rural-farm white women in the Mountain Division had the highest fertility ratios in the Nation at all ages. Rural-farm women aged 15 to 24 and 25 to 34 in the South Atlantic Division possessed the lowest fertility ratios in this residence category. Furthermore, rural-farm white women in this division ranked next to the lowest among the divisions in fertility level in the age group 35 to 44. The number of children ever born per 1,000 rural-farm women aged 15 to 24 differed greatly among the various divisions. The ratio of 1,580 for rural-farm women in this age group in the Mountain Division was approximately 27 percent higher than the ratio of 1,239 in the South Atlantic Division. The ratio of 3,127 for rural-farm women aged 25 to 34 in the Mountain States was about 20 percent above the ratio of 2,598 for the comparable group in the South Atlantic Division. Differences in fertility among the divisions for rural-farm women 35 to 44 were not as great as those at earlier ages, the greatest difference amounting to 15 percent between the Mountain and Pacific Divisions.

The ratios of children ever born per 1,000 ever-married rural-farm nonwhite women were extraordinarily high in relation to those for white women in each of the southern divisions. The ratios for nonwhites were higher in the West South Central and East South Central than in the South Atlantic States.

Fertility level of rural-nonfarm white women at different ages also exhibited regional variations, the highest in each age group being in the Mountain States. The ratios by age group were: 15 to 24, highest in the Mountain and Pacific Divisions and lowest in the South Atlantic, New England, East South Central, and Middle Atlantic Divisions; 25 to 34, highest in the Mountain, West North Central, and West South Central Divisions and lowest in the Middle Atlantic and South Atlantic States; and for 35 to 44, the group for which childbearing is near completion, highest in the Mountain, East South Central, and West South Central Divisions and lowest in the Middle Atlantic and New England Divisions.

As in the case of rural-farm nonwhite women, fertility levels were very high for rural-nonfarm nonwhite women at all ages in the three southern divisions. Ratios for nonwhite women in the South Atlantic Division were lower than in the East and West South Central Divisions.

Finally, fertility ratios for urban white women at all ages were clearly lowest in the Middle Atlantic and South Atlantic Divisions. As indicated previously, they were markedly higher at all ages in the Mountain Division. For urban white women at ages 25 to 34 and at ages 35 to 44, fertility levels were also high in the West North Central, West South Central, and East North Central Divisions.

Ratios for urban nonwhite women in the three southern divisions were higher than for urban white women but the difference was not as great as similar comparisons for rural women.

The fertility differential between white rural-farm and urban residence groups was generally greatest in the New England and Middle Atlantic States, and lowest in the South Atlantic and East South Central Divisions. The numbers of children ever born per 1,000 rural-farm white women aged 15 to 24 range among the divisions from 14 to 31 percent above the ratio for urban white women in this age group. For those aged 25 to 34 the range was from 19 to 35 percent above the ratio for urban women in this age group. The percentage difference was again greatest in the Middle Atlantic and New England Divisions, while it was lowest in the West South Central and Mountain Divisions. For women aged 35 to 44, the rural-farm ratio ranged from 26 to 41 percent above the ratio for urban women of this age. The difference was most marked in three divisions—Middle Atlantic, South Atlantic, and East South Central, and least marked in the Mountain, West South Central, and West North Central Divisions.

The rural-farm versus urban differential among nonwhite women in the three southern divisions at all ages was marked. The ratio for rural-farm nonwhite women 25 to 34 and 35 to 44 ranged from 49 to 55 percent higher in the former age group and 86 to 97 percent in the latter age group than comparable ratios for urban nonwhite women.

Rural-nonfarm white women had higher fertility rates than urban white women for all age groups and in all geographic divisions. For women aged 15 to 24, the ratio was only 15 percent higher in the New England and West North Central Divisions but rose to 24 percent higher in the Middle Atlantic Division. For the 25 to 34 group, the ratio was 10 percent higher in New England and 18 percent in the East South Central and Pacific Divisions. In the 35 to 44 group, it was 9 percent higher in New England and 33 percent in the East South Central Division.

Generally among the divisions, large differences between rural-farm and rural-nonfarm fertility levels were not apparent. As pointed out previously, the ratios for rural-nonfarm white women aged 15 to 24 in three divisions either equaled or exceeded that for rural-farm white women. Only in New England was the number of children born to rural-farm white women aged 15 to 24 more than 6 percent above the comparable rural-nonfarm ratio. In New England the difference was 13 percent. The percentage by which the rural-farm exceeded the rural-nonfarm ratio for white women aged 25 to 34 ranged from a low of about 4 percent in the East and West South Central Divisions to a high of 21 percent in New England. For white women aged 35 to 44, the rural-farm excess over rural-nonfarm ranged from a low of about 3 percent in the West South Central to a high of about 21 percent in the Middle Atlantic and New England States. The fertility differentials between rural-farm and rural-nonfarm nonwhites in the three southern divisions were greater than among whites especially for women aged 35 to 44. Ratios for rural-farm nonwhite women of this age exceeded rural-nonfarm ratios by 24 percent in the East South Central States and by 29 percent in the South Atlantic States.

Metropolitan versus nonmetropolitan patterns of fertility

That levels of fertility are inversely related to the extent of urbanization and that rural fertility levels are inversely related to proximity to metropolitan centers are commonly accepted propositions. In their classification of counties by metropolitan and non-metropolitan status and size in 1950, Duncan and Reiss summarize their findings in regard to rural fertility as follows:

> The gradient of urban influence is especially marked for fertility (particularly for the rural-farm population), educational attainment (particularly for the rural-nonfarm population), labor force participation of rural-farm females, occupation composition, and economic activities of farm operators. These results make it clear that blanket characterizations of the rural population tend to be less accurate to the degree that the rural population falls into the area of dominance of urban centers. Probably no part of the rural population in the United States is completely free from urban influence. But the degree of such influence varies greatly, at least partly as a function of proximity to urban centers and the size of those centers.[8]

This section reappraises rural fertility levels and variations for metropolitan and nonmetropolitan areas in 1960, making use of metropolitan and nonmetropolitan State economic areas (SEA's) classified by residence. The fertility measure used makes it possible to control for color and for age of woman.

The overall pattern of rural-farm and rural-nonfarm fertility. The overall pattern of fertility for the conterminous United States in 1960 is shown in figures IV-2 and IV-3. Figure IV-2 depicts the fertility level of rural-farm white women 35 to 44, by SEA's. Figure IV-3 shows fertility levels of rural-farm nonwhite women 35 to 44 for the SEA's of the South only.

Figures IV-2 and IV-3 reveal large differences in the levels of fertility among rural-farm women in the United States. The ratios of children ever born per 1,000 rural-farm white women aged 35 to 44 in all SEA's in Utah, for example, were at least 15 percent above the national rural-farm white ratio. In fact, the ratios in three of the five SEA's comprising Utah were more than 25 percent above the national average, while in California, rural-farm white fertility ratios in all except four of the State's SEA's were below the national average.

In general, the areas of high farm fertility shown in figure IV-2 are those long identified with high birth rates in the United States. Most of these high fertility ratios coincide with the low income "problem areas" in American agriculture. Many are areas in which small-scale, general, and self-sufficing farming persists, and many are relatively isolated geographically. In some instances, as for example, the SEA containing El Paso, Tex. or Lancaster, Pa., these characterizations either do not apply or are insufficient explanations. In both cases mentioned, it would seem necessary to introduce the religious affiliation variable to account for the high fertility levels. Low ratios of children to rural-farm white women, on the other hand, generally are found near or within ready access to large urban centers. Most of the low fertility areas are those in which agricultural activities are highly specialized, mechanized, and commercialized.

As indicated in figure IV-3, rural-farm nonwhites in the South also exhibited large variations with respect to fertility levels, the highest generally appearing in the enclaves of the Deep South which have had large Negro populations for many years. Such areas were found in South Carolina, Georgia, Alabama, Mississippi, and Louisiana. Fertility levels generally were lower in the border areas and in areas near larger cities.

White women of the United States in 1960 (fig. IV-4) exhibited the expected fertility differentials for each residency category and age group when classified according to residence inside and outside of metropolitan SEA's. The number of children ever born per 1,000 ever-married white women 15 to 44 residing in nonmetropolitan SEA's was about 14 percent higher than for those residing in metropolitan SEA's. This was true of each residence and age group of women. For each age group of rural-farm white women, the nonmetropolitan ratios were only slightly higher than the metropolitan. The difference was greatest for white women 35 to 44, in which instance the nonmetropolitan ratio was slightly more than 5 percent higher than the metropolitan.

The rural-farm versus urban differential in fertility level was invariably greater among white women in metropolitan than in nonmetropolitan SEA's. The ratio for rural-farm white women 15 to 44 residing in metropolitan SEA's of the United States was 32 percent higher than that for urban white women of the same age group residing in metropolitan SEA's. The comparable differential for white women in nonmetropolitan SEA's was 28 percent. A parallel situation was true for each age group of white women.

Fertility patterns by divisions. As in the case of the Nation as a whole, in 1960 white women in each of the divisions exhibited the expected higher fertility level in nonmetropolitan than in metropolitan SEA's. Ratios of children born to rural-farm white women 15 to 44 (and rural-farm nonwhite women in the South), in metropolitan and nonmetropolitan SEA's, by division, are shown in figure IV-5. This figure shows the ratios of children were higher in each division for women in nonmetropolitan areas. Figure IV-6 depicts the same relationship for rural-nonfarm women 15 to 44. In both figures, the extraordinarily high ratios of children to married nonwhite women in the South are

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Figure IV–2.—Children Ever Born Per 1,000 Ever-Married Rural-Farm White Women Aged 35 to 44, by State Economic Areas, for the Conterminous United States: 1960

[Ratio not computed unless there were 100 or more ever-married rural-farm white women aged 35 to 44, in an SEA]

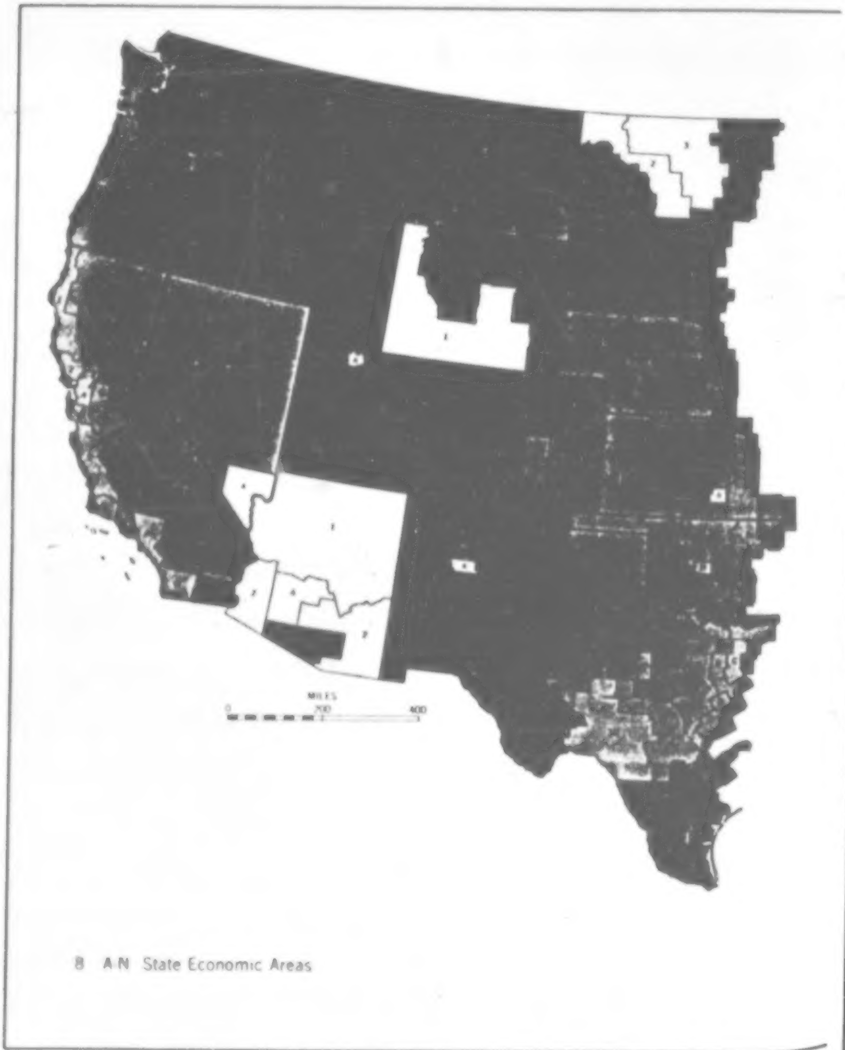
MILES
0
200
400
8 A-N State Economic Areas

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Figure IV-2.—Children Ever Born Per 1,000 Ever-Married Rural-Farm White Women Aged 35 to 44, by State Economic Areas, for the Conterminous United States: 1960—Continued

[Ratio not computed unless there were 100 or more ever-married rural-farm white women aged 35 to 44, in an SEA]

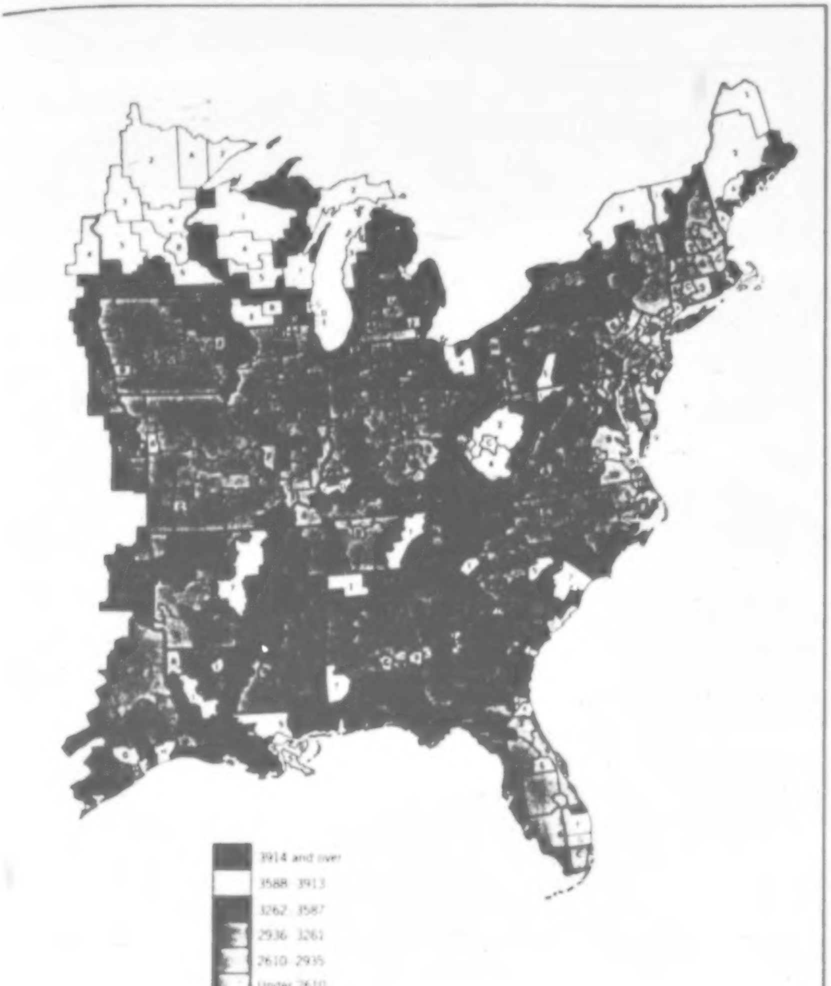
3914 and over
3588-3913
3262-3587
2936-3261
2610-2935
Under 2610
U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS

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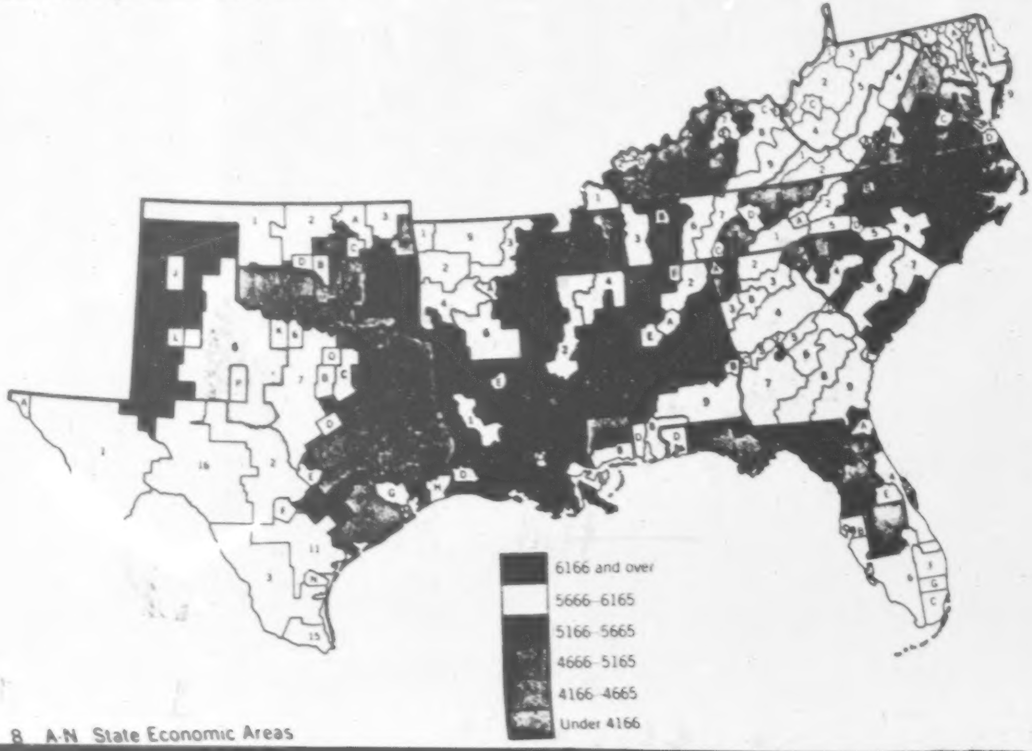
Figure IV-3.—Children Ever Born Per 1,000 Ever-Married Rural-Farm Nonwhite Women Aged 35 to 44, by State Economic Areas, for the South: 1960

[Ratio not computed unless there were 50 or more ever-married rural-farm nonwhite women aged 35 to 44, in an SEA]


6166 and over
5666–6165
5166–5665
4666–5165
4166–4665
Under 4166
8 A-N State Economic Areas

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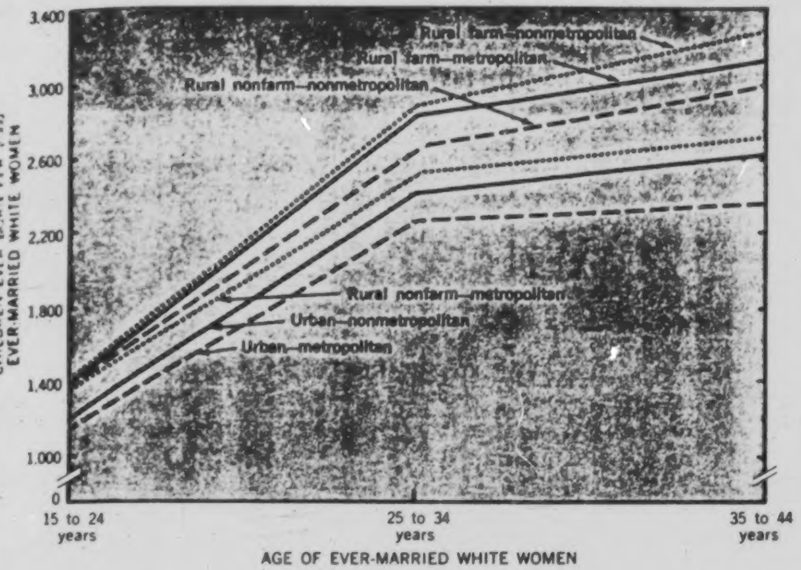
vident. Furthermore, nonmetropolitan residence generally elevates fertility vels in the rural-nonfarm sector to a greater extent than in the rural-farm ategory.

igure IV-4.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN, BY RESIDENCE, AGE, AND METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Table IV-3.

The higher nonmetropolitan ratios of children were not without exception when controlled for age of married women (table IV-3). Most of the exceptions applied to fertility ratios among white women aged 15 to 24. Rural-farm white women in this age group residing in metropolitan SEA's in the South Atlantic, Mountain, and Pacific Divisions had higher ratios than those in nonmetropolitan SEA's. Rural-nonfarm white women in this age group residing in metropolitan SEA's in the West North Central, East South Central, and West South Central had higher ratios than those in nonmetropolitan areas. The only other exception applied to rural-farm white women aged 25 to 34 in the Mountain Division.

The ratios of children ever born per 1,000 rural-farm white women 15 to 44 n nonmetropolitan SEA's were consistently higher than for those in metropolitan SEA's (fig. IV-5). While differences were not great, higher fertility ratios or rural-farm white women in nonmetropolitan SEA's held true for all divi-

Table IV-3.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN BY AGE OF WOMEN, RESIDENCE, AND NONMETROPOLITAN AND METROPOLITAN STATE ECONOMIC AREAS, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division and age	Children ever born per 1,000 ever-married white women					
	Nonmetropolitan SEA's			Metropolitan SEA's		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
UNITED STATES						
Women 15 to 44 years	2,860	2,509	2,237	2,773	2,383	2,103
15 to 24 years	1,406	1,376	1,209	1,399	1,355	1,164
25 to 34 years	2,873	2,632	2,410	2,818	2,503	2,230
35 to 44 years	3,283	2,997	2,607	3,113	2,708	2,357
NEW ENGLAND						
Women 15 to 44 years	3,010	2,454	2,258	2,718	2,345	2,184
15 to 24 years	1,533	1,375	1,238	1,419	1,262	1,137
25 to 34 years	3,068	2,583	2,386	2,781	2,394	2,238
35 to 44 years	3,376	2,811	2,616	2,972	2,596	2,461
MIDDLE ATLANTIC						
Women 15 to 44 years	2,837	2,401	2,158	2,776	2,300	2,017
15 to 24 years	1,441	1,370	1,151	1,361	1,292	1,071
25 to 34 years	2,872	2,487	2,260	2,725	2,369	2,062
35 to 44 years	3,226	2,747	2,421	3,186	2,586	2,256
EAST NORTH CENTRAL						
Women 15 to 44 years	2,910	2,540	2,292	2,829	2,481	2,182
15 to 24 years	1,439	1,437	1,241	1,376	1,413	[illegible]
25 to 34 years	2,943	2,693	2,467	2,902	2,632	[illegible]
35 to 44 years	3,271	2,978	2,650	3,156	2,789	[illegible]
WEST NORTH CENTRAL						
Women 15 to 44 years	2,925	2,590	2,306	2,846	2,517	2,201
15 to 24 years	1,460	1,365	1,202	1,417	1,477	1,204
25 to 34 years	2,977	2,771	2,509	2,875	2,688	2,377
35 to 44 years	3,302	3,060	2,712	3,136	2,879	2,502
SOUTH ATLANTIC						
Women 15 to 44 years	2,692	2,365	2,018	2,591	2,263	1,973
15 to 24 years	1,236	1,269	1,089	1,272	1,269	1,080
25 to 34 years	2,599	2,443	2,155	2,583	2,386	2,110
35 to 44 years	3,234	2,924	2,388	2,973	2,654	2,238
EAST SOUTH CENTRAL						
Women 15 to 44 years	2,782	2,546	2,044	2,720	2,396	2,034
15 to 24 years	1,301	1,329	1,105	1,175	1,341	1,130
25 to 34 years	2,687	2,605	2,193	2,683	2,497	2,182
35 to 44 years	3,368	3,256	2,468	3,214	2,851	2,356
WEST SOUTH CENTRAL						
Women 15 to 44 years	2,853	2,638	2,306	2,714	2,466	2,139
15 to 24 years	1,489	1,427	1,251	1,451	1,437	1,210
25 to 34 years	2,874	2,787	2,521	2,792	2,644	2,341
35 to 44 years	3,241	3,176	2,737	3,039	2,865	2,440
MOUNTAIN						
Women 15 to 44 years	3,047	2,782	2,477	3,032	2,536	2,323
15 to 24 years	1,571	1,542	1,341	1,664	1,451	1,285
25 to 34 years	3,119	2,957	2,688	3,226	2,687	2,505
35 to 44 years	3,473	3,312	2,922	3,465	2,973	2,651
PACIFIC						
Women 15 to 44 years	2,793	2,532	2,307	2,764	2,462	2,092
15 to 24 years	1,504	1,492	1,310	1,552	1,437	1,221
25 to 34 years	2,910	2,746	2,515	2,892	2,647	2,270
35 to 44 years	3,037	2,856	2,614	2,995	2,775	2,295

Source: Retabulated and computed from data in 1960 Census of Population.

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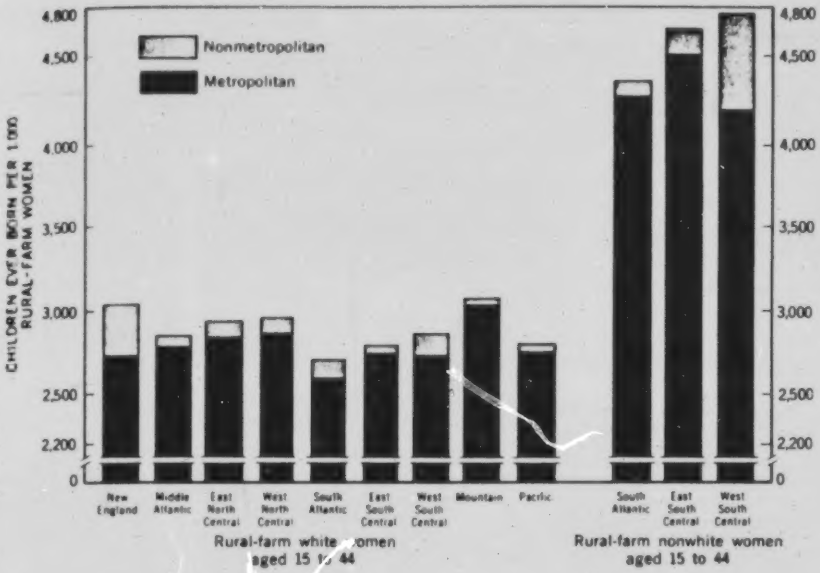
sions. The percentages by which these ratios in nonmetropolitan SEA's exceeded those in metropolitan SEA's ranged upward from a low of less than 1 percent.

Figure IV–5.—Children Ever Born per 1,000 Ever-Married Rural-Farm White Women (and Nonwhite Women in the South) Aged 15 to 44 by Metropolitan and Nonmetropolitan State Economic Areas, by Divisions, for the Conterminous United States: 1960



Source: Tables IV–3 and IV–4.

The fertility level of rural-farm white women in nonmetropolitan SEA's was especially low in the South Atlantic States. The ratio in the Mountain Division was more than 6 percent higher than the national average ratio for all rural-farm white women in nonmetropolitan SEA's; in New England it was about 5 percent higher; but in the South Atlantic Division the ratio was approximately 6 percent below the national average. In metropolitan SEA's the ratios for rural-farm white women were especially high in the Mountain Division, and especially low in the South Atlantic Division. The ratio in the former was about 9 percent above, and the latter, nearly 7 percent below the national average. Rural-farm white women in metropolitan as well as in nonmetropolitan SEA's had higher-than-average fertility in the Mountain, West North Central, and East North Central Divisions. Levels were lower than average both inside and outside metropolitan SEA's in the South Atlantic, East South Central, West South Central, and Pacific Divisions.

The rural-farm versus urban differential in fertility of married white women 15 to 44 was large in all divisions and was usually larger if residence was in metropolitan SEA's. For nonmetropolitan SEA's it was largest in the East South Central Division (36 percent) and smallest in the Pacific Division (21 percent). For metropolitan SEA's it was largest in the Middle Atlantic States (38 percent) and smallest in the New England Division (24 percent).

The rural-nonfarm versus urban differential in fertility of married white women 15 to 44 was at least moderately great in all divisions. In nonmetropolitan SEA's, rural-nonfarm ratios exceeded the urban ratio by 9 percent in New England and by about 25 percent in the East South Central Division. For women residing in metropolitan SEA's, the rural-nonfarm ratios ranged from 7 percent higher than the urban ratios in New England to 18 percent higher in the East South Central Division.

In general, ratios of children ever born per 1,000 rural-nonfarm white women 15 to 44 deviated less from urban than from rural-farm ratios in both nonmetropolitan and metropolitan SEA's. For nonmetropolitan SEA residents, the clearest exceptions were found in the three southern divisions where fertility levels of rural-farm and rural-nonfarm white women were similar. For metropolitan SEA residents, exceptions appeared only in the East South Central, West South Central, and Pacific Divisions.

Table IV-4.—Children Ever Born Per 1,000 Ever-Married Nonwhite Women by Age of Women, Residence, and Nonmetropolitan and Metropolitan State Economic Areas, by Divisions of the South: 1960

Division and age	Children ever born per 1,000 ever-married nonwhite women					
	Nonmetropolitan SEA's			Metropolitan SEA's		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
SOUTH ATLANTIC						
Women 15 to 44 years	4,358	3,605	2,904	4,180	3,398	2,531
15 to 24 years	2,019	2,031	1,871	2,079	2,052	1,806
25 to 34 years	4,300	3,733	3,127	4,035	3,553	2,791
35 to 44 years	5,483	4,285	3,167	5,103	3,933	2,620
EAST SOUTH CENTRAL						
Women 15 to 44 years	4,689	3,889	3,105	4,515	3,734	2,798
15 to 24 years	2,160	2,099	1,905	1,801	2,014	1,879
25 to 34 years	4,823	4,130	3,362	4,507	3,942	3,061
35 to 44 years	5,835	4,729	3,457	5,663	4,509	2,937
WEST SOUTH CENTRAL						
Women 15 to 44 years	4,771	3,937	3,137	4,184	3,649	2,652
15 to 24 years	2,259	2,083	1,915	1,571	2,096	1,783
25 to 34 years	4,701	4,108	3,342	4,601	3,872	2,923
35 to 44 years	6,009	4,765	3,578	5,319	4,301	2,805

Source: Retabulated and computed from data in 1960 Census of Population.

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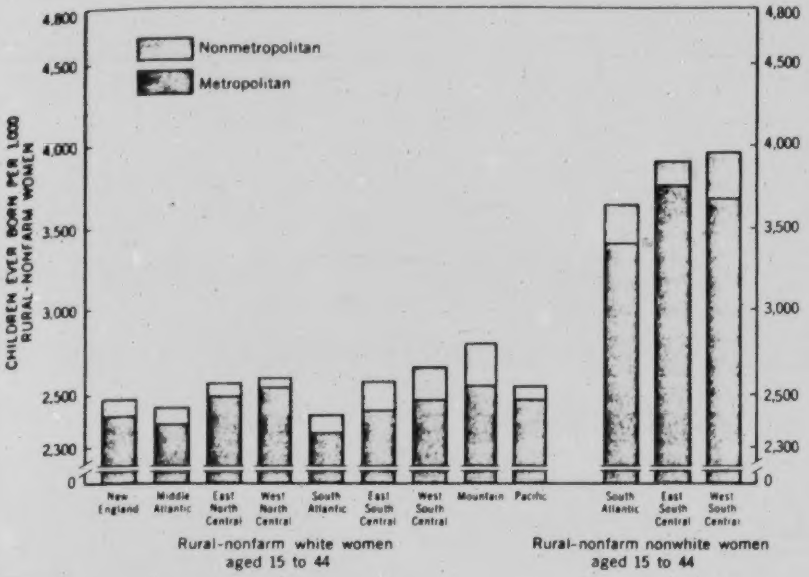
Figure IV-6.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED RURAL-NONFARM WHITE WOMEN (AND NONWHITE WOMEN IN THE SOUTH) AGED 15 TO 44 BY METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Tables IV-3 and IV-4.

As in the case of white women, nonwhites in the three southern divisions exhibited higher fertility when residence was in nonmetropoltan SEA's (table IV-4 and figs. IV-5 and IV-6). The ratios of children ever born per 1,000 rural-farm nonwhite women 15 to 44 residing in nonmetropolitan SEA's were higher than for those in metropolitan SEA's in each of the three divisions of the South. The difference was not great, except in the West South Central Division where the rural-farm nonmetropolitan ratio was aproximately 14 percent higher than the metropolitan ratio.

The rural-farm versus urban differential in fertility of nonwhite women 15 to 44 was very large. In each of the three southern divisions, the difference was at least 50 percent and was larger in metropolitan than in nonmetropolitan SEA's.

Changes in rural-farm and rural-nonfarm fertility, 1950–1960

The long-time downward trent in fertility, as well as the long-time narrowing of group differences in fertility of the American population, are well documented.[7] In *The Fertility of American Women*, Grabill writes:

> The decline in ratios of young children to women reflected a genuine demographic revolution, a growing disinclination of married couples to have many children. The revolution was related to the same forces that caused the development of modern society; the rapid advance in arts and science and the adoption of a rational approach in individual and family living. In America, fertility began to decline before there was any appreciable proportion of the population residing in urban areas.[8]

In the section on "The outlook for fertility differentials" of the same volume, the authors say:

> It seems likely to the authors that the long-range trend will be toward continued narrowing of group differences in fertility. The differences between rural and urban areas with respect to style of life are being lessened by reduction in the relative size of the farm population, by improvements in highways and means of transportation, and by television, radio, and movies . . . . Selective factors alone probably will continue to account for appreciable urban-rural difference in fertility, but, in general, the outlook is for reduction in the magnitude of these differentials.[9]

This brief section attempts only to examine changes in the number of children ever born to ever-married women according to residence in 1950 and in 1960. No attempt has been made to correct for changes in definition in the two census periods. Table IV–5 summarizes the number of children ever born to ever-married white women, by age groups of women, and by residence for the conterminous United States, 1950 and 1960. This table also shows comparable fertility measures for nonwhite women in the South only.

Several observations must be made concerning the gross ratios of children ever born per 1,000 women (table IV–5). First, the high rural-farm, intermediate rural-nonfarm and low urban ratios held true for whites in the Nation and nonwhites in the South for all ages of women and for both decades. Second, the ratios in 1960 were higher than in 1950 for whites and nonwhites at all ages and in all residence groups, except for the ratio of rural-farm white women 35 to 44 in 1960 which was slightly lower than in 1950. And third, the rural-farm versus urban differential was smaller in 1960 than in 1950 for both whites and nonwhites at all ages.

The ratio of children ever born per 1,000 ever-married white women 15 to 44 in the conterminous United States in 1960 was 2,849, or slightly more than 12 percent above the 1950 figure of 2,537. The ratio for rural-nonfarm white women in 1960 was 2,469, or about 21 percent above the 1950 ratio of 2,046. For urban white women in 1960 the ratio was 2,132, or 31 percent higher than in 1950 when it was 1,628. Thus, the relative increases in fertility between 1950 and 1960 for white women 15 to 44 were greatest in urban areas and least in rural-farm areas.

Similar changes during the decade were also true of nonwhites in the South. Increases in the ratios of children ever born per 1,000 nonwhite women in the South were markedly greater in all residence categories than for whites. The ratio for rural-farm nonwhites in the South was approximately 32 percent higher

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in 1960 than in 1950; for rural-nonfarm nonwhites, it was 44 percent higher; and for urban nonwhites, it was nearly 48 percent higher.

Table IV-5.—CHILDREN EVER BORN PER 1,000 EVER-MARRIED WHITE WOMEN (AND NONWHITE WOMEN IN THE SOUTH), BY AGE OF WOMEN AND RESIDENCE, FOR THE CONTERMINOUS UNITED STATES: 1960 AND 1950

Color and age	Children ever born per 1,000 ever-married women							
	1960				1950			
	Total	Rural farm	Rural nonfarm	Urban	Total	Rural farm	Rural nonfarm	Urban
UNITED STATES—WHITE								
Women 15 to 44 years	2,254	2,849	2,469	2,132	1,828	2,537	2,046	1,628
15 to 24 years	1,236	1,405	1,370	1,175	942	1,131	1,091	847
25 to 34 years	2,379	2,867	2,590	2,269	1,825	2,458	2,083	1,635
35 to 44 years	2,575	3,262	2,903	2,408	2,271	3,266	2,597	1,981
SOUTH—NONWHITE								
Women 15 to 44 years	3,143	4,522	3,707	2,729	2,372	3,438	2,575	1,848
15 to 24 years	1,919	2,093	2,058	1,835	1,402	1,619	1,471	1,253
25 to 34 years	3,328	4,525	3,870	2,976	2,392	3,472	2,683	1,879
35 to 44 years	3,575	5,665	4,432	2,921	2,960	4,640	3,265	2,152

Source: Retabulated and computed from data in 1960 Census of Population; 1950 Census of Population, Vol. IV, Special Reports, Part 5, chapter C, *Fertility*, table I.

The fertility differential between rural-farm and urban residents, and between white women in the conterminous United States and nonwhite women in the South, had narrowed markedly between 1950 and 1960. Some, but not all, of the contraction in the differentials may have been due to changes in definition. For white women 15 to 44 in the conterminous United States in 1950, the fertility measure used was almost 56 percent higher in rural-farm than in urban populations; in 1960, this difference amounted to approximately 34 percent. Among nonwhite women 15 to 44 in the South in 1950, the ratio was 86 percent higher in the rural-farm than in the urban population; in 1960, the difference amounted to about 66 percent. The narrowed rural-farm differential during the decade was true for each age group of women and for both whites and nonwhites.

Summary

Marked differences in the level of fertility of rural and urban women of the United States were apparent in 1960. While the level of fertility in all residence groups was higher in 1960 than in 1950, the rural-urban differential had narrowed during the decade. The ratio of children ever born per 1,000 rural-farm white women was from one-fifth to more than one-third higher than comparable urban white ratios. This differential was even greater for nonwhites in the South. The levels of fertility in the rural-farm and the rural-nonfarm components were generally more similar to each other than either rural group was to the urban residence group.

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Ratios of children ever born to ever-married rural-farm white women generally were highest in the West and North Central Regions. More specifically, they were highest for all ages of rural-farm white women in the Mountain Division and were especially low in the South Atlantic, Middle Atlantic, and Pacific Divisions. Ratios for rural-farm nonwhite women in the South were extraordinarily high. In each division of the South, the nonwhite ratio was well over 50 percent above the white ratio.

With few exceptions, residence in metropolitan SEA's, in contrast to nonmetropolitan SEA's, served to depress fertility levels of all residence categories. This was true of whites and nonwhites and for each age group of women, with few reservations. Thus, the influence of large centers on fertility levels was supported. However, it must be pointed out that rural-farm ratios in nonmetropolitan SEA's were not greatly in excess of those in metropolitan SEA's. Furthermore, the rural-farm versus urban fertility differential was usually greater in metropolitan than in nonmetropolitan SEA's.

NOTES

[1] Wilson H. Grabill, Clyde V. Kiser, and Pascal K. Whelpton, *The Fertility of American Women* (New York: John Wiley and Sons, Inc., 1958), pp. 83 and 84.

[2] William Petersen, *Population* (New York: The Macmillan Company, 1961), p. 218.

[3] Grabill, Kiser, and Whelpton, *op. cit.*, chapters 5, 6, and 7; Donald J. Bogue, *The Population of the United States* (Glencoe: The Free Press, 1959), chapter 12 (reprinted with permission of The Macmillan Company); National Resources Committee, *The Problems of a Changing Population* (Washington: U.S. Government Printing Office, 1938).

[4] The data in the 1960 Census for children ever born are based on a 25-percent sample of the population and derived from answers to the following question on the household questionnaire: "If this is a woman who has ever been married—how many babies has she ever had, not counting still births? Do *not* count her stepchildren or adopted children."

[5] Grabill, Kiser, and Whelpton, *op. cit.*, appendix A, p. 402.

[6] Otis Dudley Duncan and Albert J. Reiss, Jr., *Social Characteristics of Urban and Rural Communities* (New York: John Wiley and Sons, Inc., 1956), p. 168. See comment on these fertility findings by Grabill in Grabill, Kiser, and Whelpton, *op. cit.*, pp. 88–90.

[7] Grabill, Kiser, and Whelpton, *op. cit.*, especially chapters 2, 3, and 4; Clyde V. Kiser, "Differential Fertility in the United States" in National Bureau of Economic Research, *Demographic and Economic Change in Developed Countries* (Princeton: University of Princeton Press, 1960), pp. 77–113; T. J. Woofter, "Trends in Rural and Urban Fertility Rates," *Rural Sociology*, vol. 13, No. 1, March 1948, pp. 3–9; and Bureau of the Census, "Fertility of the Population: March 1957," *Current Population Reports*, Series P–20, No. 84, 1958.

[8] Grabill, Kiser, and Whelpton, *op. cit.*, pp. 15 and 16.

[9] *Ibid.*, p. 378.

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CHAPTER V

FACTORS RELATED TO FERTILITY DIFFERENCES

Introduction

Data relating to fertility levels in different components of the American population were discussed in chapter IV. These data showed that fertility rates in the rural population were higher than in the urban population, but that these differences were diminishing over time. Substantial differences in levels of fertility were found among the regions for each of the residence components.

This chapter analyzes the factors that are related to the large observable differences in fertility rates among counties in each of the residence groups of the population in the conterminous United States in 1960. Based on literature dealing with fertility differentials,[1] it is expected that fertility differences among communities can be explained to a large extent by variations in three kinds of characteristics: (1) socioeconomic, (2) demographic, and (3) ecological. A standard regression analysis was performed in which the fertility rate of a community was used as the dependent variable and the independent variables were chosen to represent these three types of characteristics which were expected to be closely related to fertility differences among communities. The county was the unit of observation in the analysis.

The regression analysis was done separately for the rural-farm, rural-nonfarm, and urban white populations at the national, regional, and divisional levels. Since nonwhites comprise a small proportion of the rural population outside of the South, the analysis for nonwhites was carried out only for the divisions in that region. The divisional analyses will not be discussed in this chapter because of space limitations.[2]

Hypotheses underlying the analyses

Three basic hypotheses were tested with respect to fertility levels: First, that differences in fertility levels were related to certain socioeconomic, demographic, and ecological characteristics of the populations of communities. The socioeconomic variables included income levels, occupational distributions, and educational levels. The demographic factors were limited to the age distribution of women. The ecological factors were the location of a community with respect to other communities and the size of these communities. Second, that the effect of these factors upon fertility levels was different in the several geographic regions of the Nation. Third, that the effects of these variables upon fertility levels would vary among residential sectors of the population. For example, the educational level would affect fertility rates of the urban population differently from the way it affected the rural population.

The first hypothesis was tested by the use of multiple regression analysis;[3] the second, by the application of multiple comparison tests of the results among the regions; and the third hypothesis, by the use of multiple comparison tests among the residence groups.

Variables used in the analyses

The dependent variable used in the statistical model as a measure of fertility level in a community was the number of children ever born per 1,000 ever-married women 15 to 44 years of age. Nine independent variables were used as indicators of the socioeconomic, demographic, and ecological characteristics of communities. These variables, and their hypothesized relationship to the variable used to measure fertility, are presented below.

Socioeconomic characteristics. Six of the nine independent variables used in the analysis represented this catergory of factors. Specifically, they were measures of educational level, occupation distribution, and income level. These characteristics of populations have traditionally been related to fertility and have been commonly used to explain the phenomenon of differential fertility.

Educational level. Previous studies of the relationship between fertility and education have consistently shown an inverse relationship.[4] This relationship generally obtains regardless of whether the educational measure applies to the husband, to the wife, or to both, and regardless of residence category. Kiser found that a strong inverse relationship between fertility and the educational attainment of the wife was maintained for all residence groups in the period 1940 to 1950 when proportional increases in fertility were directly related to educational attainment.[5] Goldberg found that educational level was more highly associated with fertility level than certain other socioeconomic measures for second generation urbanites and farm migrants.[6]

Level of education may be said to have both a direct and indirect effect upon fertility levels. The direct effect was found in the positive relationship observed between level of education and the knowledge and use of family limitation practices. Indirectly, education was related to factors associated with fertility differences, such as the maintenance or improvement of status, age at marriage, female employment, and income.

The present analysis employs the median number of school years completed by males and females 25 years old and over as a measure of the educational level of the population. While the educational level of married persons in the ages 15 to 44 would have been a more appropriate measure, such data were not available in the Census records. The use of educational level for both sexes was more restrictive than alternative measures of educational level, and assumed that typically both marriage partners shared in decisions relating to family size. It was hypothesized, therefore, that the level of education was inversely related to fertility, and that this relationship would be found in each of the three residence components.

Occupation. Few measures of social status have been utilized more frequently than occupation in relation to level of fertility. While a large number of studies conclude that occupational and fertility levels are inversely related, the relationship is not always inverse, nor is the inverse relationship, when found, always a strong one. Some inherent weaknesses are involved in the use of the occupational group of the husband as a variable influencing fertility level. The occupation may be described with insufficient accuracy by the wife; occupation is subject to change, and previous occupations held may be at least as important as the current one in influencing fertility; and finally, a wide range of income and status positions may be found within a given occupational category.

Grabill, Kiser, and Whelpton indicated that in general farmers and farm managers, farm laborers and farm foremen, laborers, and operatives are in the high fertility group. Service workers and craftsmen are in the intermediate group, while clerical workers, managers, officials, proprietors, and professionals are usually in the low fertility group. In a comparison of the residential sectors, they indicate that the pattern of differentials in fertility by occupational group is much the same in urban, rural-nonfarm, and rural-farm populations.[7]

Two measures are used to represent occupational distribution of the population in this analysis: The proportion of employed males in the labor force who are farmers and farm managers, and the proportion who are farm laborers and farm foremen. These are primarily measures of agricultural occupational distribution but are included in the rural-nonfarm and urban analyses as well as in the rural-farm analysis. In chapter VII, which deals with occupational distribution, it will be shown that for rural males there is an inverse relationship between the proportion engaged in farming and in other occupations. Thus, the proportion engaged in farming is also a measure of the nonfarm occupational structure. In terms of relative importance in each sector, these two major occupational groups in agriculture constitute 68 percent of the employed rural-farm work force, 8 percent of the rural-nonfarm work force, and only 1 percent of the urban work force.

Agricultural occupations have traditionally been associated with high fertility levels. In agriculture, unlike most other occupations, children can be gainfully employed at an early age. Since the farm operation is often organized around the labor of the family members, an additional farmhand who increases the total product without increasing farm operating costs constitutes an economic asset on farms. Thus, it is assumed that the combination of values and economic incentives for farm operators is such as to encourage high fertility rates. In the formulation of this model, it is hypothesized that there is a positive relationship between fertility rates and the proportion of males in a community employed as farmers and farm managers.

High fertility rates generally characterize farm laborers. However, farm foremen, a part of the larger occupational category, are characterized by lower fertility levels than farm laborers. While it is unfortunate that the occupational group, farm laborers and farm foremen, contains two components having markedly different status, the severity of this problem is diminished by the fact that farm foremen do not comprise a large proportion of those engaged in agriculture in any area of the United States.

The explanation of high fertility among farm laborers would seem to be more social than economic, although they might have a lower cost of rearing children insofar as they reside in rural areas. Children, however, would not be likely to have the same economic value as unpaid family members as they have for farm operators. Generally, hired farm laborers are low in social status and prestige and this, rather than the economic value of children, would account for a positive relationship between fertility and the proportion of farm laborers and farm foremen in a population. On this basis, it is expected that the proportion of males employed in the work force as farm laborers and farm foremen is positively related to fertility level.

Income level. Income has frequently been used as a measure of social or economic status and numerous studies have found an inverse relationship between income and fertility. An exception to this general finding is the positive relationship of income and fertility in the upper income brackets. This relationship, consequently, often resembles a J-shaped curve, as Bogue notes:

> . . . a J-shaped relation of fertility with economic status has often been noted. That is, fertility tends to be successively less in population groups of successively higher economic status until a certain status is reached; then either levels off, or increases as still higher economic status is reached.[8]

In spite of this exception, the predominant relationship between income and fertility level is generally considered to be negative. The rationale for this hypothesis—for income as well as for other measures of socioeconomic status—is generally in terms of status maintenance or striving, accompanied by a high degree of rationality, or in terms of the spread of normative patterns from upper to lower social strata.

In recent years, economists have put forth the argument that children may be regarded as consumption goods, and as such, a positive relationship between income and fertility can be expected. For instance, Becker [9] found a positive relationship, as did Freedman.[10] Using data from 37 nations,[11] Adelman found that birth rates varied directly with national per capita income.

In this analysis, the variable employed to measure income level was median family income of the population component of a county. The question might be raised as to whether income level should be measured in terms of family income or income for the head of the family alone. Family income was used because of limitations in the data. There may be a positive relationship between family income and female income that blurs the relationship between income and fertility. Freedman *et al.* discussed the question in the following manner:

> Why is the relationship of fertility to income somewhat stronger when family income rather than husband's income is used as the basis of classification? It is because the couples with low family incomes are more likely to be those in which the wife does not work and has relatively many births, while the couples with high family incomes are more heavily weighted with those that include working wives who have relatively few children.[12]

Thus, since female income may increase family income, it may at the same time be a factor conducive to an inverse relationship between family income and fertility level.

Two additional variables were used in the analysis to further investigate these relationships: The percentage of females 14 years old and over in the population who were employed; and the median female personal income. It had been observed that within each of the three residence categories, the fertility rate was considerably lower for married women who were in the labor force than for those who were not.[13] If all women, regardless of marital status, were included, the same pattern would obtain because many single, widowed, and divorced women were in the labor force. In the case of unmarried women in the labor force, then, it was assumed that they comprise those women who have postponed marriage or who have chosen a career which is incompatible with marriage. Thus, labor force participation may be viewed by women as an alternative to having children. It was hypothesized that working women at a given point in time generally had fewer children than nonworking women, or that the female employment rate was inversely related to fertility level.

The second variable, female personal income, may be considered to reflect the opportunity cost of having children in terms of income foregone by the wife. Thus, as female earnings rise, the opportunity costs of childbearing will also rise. On this basis, it was hypothesized that fertility levels were inversely related to earnings of employed females.

Demographic variables. It was pointed out in chapter III that the age structure of each of the rural population components differed in important ways from that of the urban population. Moreover, the age structure of a given residence component varied among the geographic regions.

Fertility rates specific to different age groups of married women indicated that the number of children ever born increases as the age of the group increases.

In the rural-farm sector of the conterminous United States in 1960, for instance. the number of children ever born per 1,000 ever-married women 15 to 24 years of age was 1,436; for the group 25 to 34, it was 2,745; and for the group 35 to 44, it was 3,125.[16]

The number of children born was, in part, a function of time. As the average age of women in a community increased up to about 45, the average number of children born to those women also increased. It was assumed, therefore, that fertility, as measured by the number of children born to married women of that population was highly related to the age distribution of women. As measures of age distribution, the proportion of ever-married women in the 15 to 44 age group who were 15 to 24 years old and the proportion of those who were 25 to 34 years old were used.

Thus, it was assumed that intercommunity fertility rates would be affected by the proportion of married women in the different age groups. It was hypothesized, for both rural and urban populations, that fertility rates were inversely related to the percentage of ever-married females who were in the younger age groups, i.e., 15 to 24 and 25 to 34. The age group 35 to 44, therefore, was omitted from the statistical analysis.

Ecological factors (distance and size). It was assumed that the size of a community as well as its position in relation to large centers were important variables in accounting for differences in the community's social structure which would be manifest in each of the residence components of counties. Fertility behavior and variations in fertility were viewed as one manifestation of differing social organization at different distances. The rural-farm populations at differing size-distance conditions, for example, might be expected to differ systematically with respect to population characteristics, occupational homogeneity, agricultural specialization. and the extent of interaction and interdependence with other communities.

One of the three measures of proximity to large urban centers discussed in chapter I was selected for the analysis of fertility. Originally, the regression analysis for all levels was run three times, using one of the proximity variables in each equation. As in the case of the income equations presented in chapter VIII. the statistical results for the fertility analysis revealed that the size-distance variable resulted more frequently in higher multiple correlation coefficients. This measure was used in the analysis which follows.

It should be noted that this variable is a measure combining size and distance from large urban centers. The size-distance variable represented not only proximity to urban centers, but also the size of the influencing urban center. Thus, it was our hypothesis that fertility levels of rural and urban communities would rise with increasing distance from metropolitan centers, and that rural and urban communities near metropolitan centers of a relatively large size would possess lower fertility levels than those near smaller metropolitan centers.

Characteristics related to fertility differences in the rural-farm white population

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Some of the results of the statistical analysis of fertility differences among rural-farm populations are shown in table V-1.[13] They will be discussed in terms of the three groups of factors—socioeconomic, demographic, and ecological—expected to be related to fertility differences within a residence component.

Table V-1.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO FERTILITY RATES OF WHITE FEMALES IN THE RURAL-FARM POPULATION, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

[In beta coefficients]

Selected characteristic[1]	United States	North-east	North Central	South	West
SOCIOECONOMIC					
Education	[2]-.2676	-.0474	[2]-.3614	[2]-.2898	-.0181
Family income	[2].2292	[2]-.2014	[2].0838	[2]-.0734	[2]-.1961
Female employment	[2]-.0925	.1430	[2].1006	[2]-.2320	-.0987
Female income	[2]-.0709	[2]-.2743	[2]-.1552	.0225	[2]-.1247
Farmers and farm managers	[2]-.0511	-.0590	[2]-.1653	[2]-.2436	[2]-.1532
Farm laborers and foremen	[2].1362	[2].2573	[2].2493	[2].1315	.0359
DEMOGRAPHIC					
Females aged 15 to 24 years	[2]-.1903	[2]-.1874	[2]-.2615	[2]-.0774	[2]-.2851
Females aged 25 to 34 years	[2].0599	-.1128	[2].0318	.0338	-.0197
ECOLOGICAL					
Proximity to SMSA and size	[2]-.2540	[2]-.3692	[2]-.3214	[2]-.1640	[2]-.2158
Multiple correlation coefficient	.4070	.5318	.5650	.5021	.4847

[1] The specific variables used for county populations are: Median number of school years completed by males and females 25 years old and over; median family income; percentage of females 14 years old and over employed; median personal income of females; percentage of farmers and farm managers, farm laborers and farm foremen; percentage of ever-married women 15 to 44 who were aged 15 to 24 and 25 to 34; and proximity to standard metropolitan statistical area; and size.

[2] The regression coefficient was significantly different from zero at the .05 level.

Source: Computed from data in 1960 Census of Population.

Socioeconomic characteristics. In this group, the level of education clearly was a factor significantly related to fertility levels of the rural-farm white population. As expected, this relationship was negative at the national level and in each of the regions, although it was not statistically significant in the Northeast and West. Thus, the widespread hypothesis that higher levels of education are associated with lower fertility appeared to hold for intercommunity as well as interfamily comparisons.

The relationship between family income and fertility of the rural-farm white population was less straightforward. At the national level, there was a strong positive relationship between family income and fertility. This by itself would confirm the economic hypothesis that children may be regarded as preferred consumer goods. But, at the regional level, there were significant negative relationships between family income and fertility, except in the North Central Region. If the relationship actually were positive, it should hold for smaller geographical units as well as for the Nation. Since it does not, there may be other reasons for the relationships that were observed.

If family income is closely related to social status and if there are large regional differences in family income levels, then it may not be a valid measure among regions. In chapter IX, it will be pointed out that large regional differences in family income levels do exist in the United States, especially for the rural-farm and rural-nonfarm populations. If family income is related to social status, it undoubtedly is related by way of relative, rather than absolute, income levels. Thus, a family income of $5,000 in an area where the median family income is $2,000 may represent high social status, while that same family income may represent low social status in an area where the median income is $7,500.

Given the observed regional differences in family income, it appeared that the true relationship between family income and fertility in the rural-farm white population was negative. The relationship found in the national analysis appeared to be spurious. It may have arisen because of the high fertility levels of certain religious groups found in larger numbers in the rural-farm population of the Northeastern and Western Regions, regions which also had higher-than-average family income levels. The relationship between family income and fertility of the rural-farm white population was different in the North Central Region from that in the other regions. In that area, the relationship was low and positive.

The relationship between female employment and female income levels and fertility rates were somewhat mixed. At the national level, there was a significant negative relationship between both female employment and female income, and fertility levels. Thus, as either the frequency of female employment or the reward from it rose, the fertility level of rural-farm white females declined. In the Northeast and West, two areas where underemployment in rural areas was generally low, there was no significant relationship between female employment and fertility levels, but there was a significant negative relationship between the rate of reward of employed females and fertility. In the South, where underemployment in rural areas was prevalent, there was a strong negative relationship between white female employment and fertility but no significant relationship between the rate of reward of white female workers and fertility levels in the rural-farm communities. In the North Central Region, there was the expected negative relationship between white female income and fertility rates. The relationship of white female employment to fertility was positive, but not very strong.

Thus, it appeared that for the rural-farm white population there was a significant relationship between female employment, rate of reward for this employment, and the fertility rate. In the higher income areas (outside of the South), the level of female income generally is more important than frequency of employment. In the South, where rural-farm incomes were low and underemployment widespread, the frequency of female employment was much more important.

The final group of socioeconomic variables included in the analysis dealt with the relationship of two types of farm employment to rural-farm fertility. Surprisingly, there was a consistently negative correlation between the proportion of farmers and farm managers in the rural-farm population and rural-farm fertility. This suggests that in modern agriculture, as elsewhere in the economy, the positive economic value of children as a source of labor is negligible. Moreover, farm operators, as defined by the census, probably should no longer be regarded as being in one of the low-status occupations. This negative relationship was found for the Nation and for each of the regions, with no appreciable regional differences.

The expected positive relationship was found between the proportion of white farm laborers and foremen in the rural-farm population and rural-farm fertility rates. This relationship, apparent at the national level and for each of the regions, presumably was due to the lower social status of farm laborers and did not depend upon an economic rationale.

Demographic characteristics. Only two characteristics of the rural-farm white population were included in the analysis, both concerned with the age distribution of married females. A significant negative correlation was observed between fertility and the proportion of females in the 15 to 24 age group. It held at the national level and for each of the regions, although it was not strong in the South. This latter fact might be explained if the marriage age in the South were significantly lower than in the other regions, inasmuch as that would tend to push the childbearing span forward in terms of the mother's age.

The relationship between rural-farm white fertility rates and the proportion of married women aged 25 to 34 varied from region to region and was not very strong in any region. At the national level and in the North Central Region, it was positive. In the other three regions, it was not a factor of significance in explaining variance in fertility among communities.

Ecological characteristics. As expected, there was a strong negative relationship between the fertility rate of the rural-farm white population and proximity to a large SMSA. This relationship was observed at the national level and for each of the regions, with little difference among the regions. Apparently, for the rural-farm white population, proximity to large urban areas is directly and strongly related to patterns of social organization and the assimilation of urban values regarding family size. In some areas only the level of education outranked the proximity variable in explaining the observed variance in rural-farm white birth rates.

The inclusion of the proximity variable in the analysis may help to clarify to some extent the true relationship between occupation and fertility levels. Since a subsequent chapter indicates a relationship between certain occupations and proximity to large urban areas, analysis including only occupation may have picked up the urban influence and erroneously attributed it to the prevalence of farm operators in the occupational structure.

Regional differences in the rural-farm white population. The different regions exhibited some differences in the relationship among the three groups of characteristics and fertility of the rural-farm white population. For instance, education had a markedly different relationship to fertility in the rural-farm population of the North Central Region and the South than elsewhere. The relationship of family income to fertility also varied from region to region. In general, these relationships differed most in the North Central Region and the South, with the Northeast and West showing similar ones.

Additional observations. On the basis of these findings it was concluded that a significant portion of the variance in fertility levels among the rural-farm white populations in the United States was related to the differences in socioeconomic, demographic, and ecological characteristics of the population of the area. Moreover, the relationships were generally as postulated, a major exception being the consistently negative one between the proportion of farmers and farm managers in an area and the fertility level.

Each of the regional analyses had a greater explanatory power than did the national (as measured by the R_2). This was not surprising inasmuch as several of the variables in the analysis, such as family income, were proxy variables for certain elements of social structure which were not readily measurable. It is to be expected that such a proxy variable would be likely to prove most satisfactory over areas which have some homogeneity. Indeed, if the area of analysis was so large as to include widely heterogeneous social structures, the results might be either disappointing, or misleading, or both.

Characteristics related to fertility differences in the rural-nonfarm white population

The general relationships between the variables in our analysis and the fertility of the rural-nonfarm white population are shown in table V–2. The proportion of the variance in rural-nonfarm white fertility explained by the three sets of characteristics was usually greater than for the corresponding rural-farm white population. As was the case for the rural-farm white population, the regional analyses were "better" than the national analysis, although this was not the case for the North Central Region.

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Table V–2.—Relationship of Selected Characteristics to Fertility Rates of White Females in the Rural-Nonfarm Population, by Regions, For the Conterminous United States: 1960

[In beta coefficients]

Selected characteristic[1]	United States	North-east	North Central	South	West
SOCIOECONOMIC					
Education	[2]-.2037	.0087	[2]-.2622	[2]-.3057	[2]-.3477
Family income	[2].2235	[2]-.1861	-.0232	[2]-.0596	[2]-.1777
Female employment	[2]-.2393	[2]-.1719	[2].0690	[2]-.3446	[2]-.1719
Female income	-.0261	-.0477	[2]-.1157	.0276	-.0351
Farmers and farm managers	-.0149	-.0876	[2]-.1527	[2]-.1105	[2].2088
Farm laborers and foremen	[2].2203	[2].3040	.0051	[2].2728	.0200
DEMOGRAPHIC					
Females aged 15 to 24 years	[2]-.1716	-.0365	[2]-.2047	[2]-.1613	[2]-.1322
Females aged 25 to 34 years	[2].0485	-.0523	[2].0653	[2].0446	.0115
ECOLOGICAL					
Proximity to SMSA and size	[2]-.3139	[2]-.4290	[2]-.2825	[2]-.1982	[2]-.1349
Multiple correlation coefficient	.5211	.6747	.4324	.6449	.6667

[1] The specific variables used for county population are: Median number of school years completed by males and females 25 years old and over; median family income; percentage of females 1[illegible] years old and over employed; median personal income of females; percentage of farmers and farm managers, farm laborers and farm foremen; percentage of ever-married women 15 to 44 who were aged 15 to 24 and 25 to 34; and proximity to standard metropolitan statistical area; and size.

[2] The regression coefficient was significantly different from zero at the .05 level.

Source: Computed from data in 1960 Census of Population.

Socioeconomic characteristics. The level of education clearly was a factor significantly related to fertility levels of the rural-nonfarm white population. As expected, this relationship was negative at the national level and in three of the four regions. The relationship proved to be positive but nonsignificant in the Northeast. Thus, increased levels of education in the rural-nonfarm white population are associated with lower fertility.

The family income correlation revealed the same inconsistency between the national and regional analyses that was found in the rural-farm population. For the Nation, there was a positive relationship between family income and fertility levels in the rural-nonfarm white population, but it was negative in each of the regions, although not significant in the North Central Region. For much the same reason as previously presented, it appeared that the negative relationship probably was the meaningful one. However, taking the rural-farm and rural-nonfarm together, it seemed that in the North Central Region there was no significant relationship between family income and fertility rates in the rural white population. One can only speculate as to why the exception would be true only in this region.

The variables relating to female employment and income from it were related to fertility levels in the rural-nonfarm white population. Both exhibited the expected negative relationship to fertility at the national and regional levels, except in a few cases in which they were insignificant. For this population sector it was female employment that was of greatest relative importance, whereas for the rural-farm white population income was of greatest importance, except in the South.

At the national level, the proportion of white farmers in the rural-nonfarm work force was not significantly related to fertility. This was not surprising since they made up only 3.5 percent of the employed rural-nonfarm males. However, in the North Central Region and the South where the proportions of farmers and farm managers in the rural-nonfarm labor force were highest, there was a significant negative correlation between the proportion of farmers and farm managers and fertility. However, in the West, there was a strong positive relationship. This stems from the fact that farmers and farm managers in the rural-nonfarm white population were found primarily in the Mountain Division which also had the highest fertility of the divisions for each of the three residence categories. Thus, these two characteristics happened to occur together, but it would be a mistake to assume a cause-and-effect relationship in this situation.

The proportion of farm laborers and farm foremen in the rural-nonfarm white population exhibited an unexpectedly strong positive relationship to fertility. This was true nationally where this occupational category constituted only 5 percent of the rural-nonfarm employment and in the Northeast where the percentage was even smaller. In the South, where farm laborers were much more numerous in the rural-nonfarm population, there may be validity to the observed relationship, but its relative importance in the national analysis must be viewed with skepticism. The lack of significant relationships in the North Central Division and the West appeared reasonable.

Demographic characteristics. The presence of females aged 15 to 24 in the white population was negatively related to rural-nonfarm fertility at the national level and in three of the four regions. In the Northeast, there was no significant relationship between age structure and fertility—a somewhat surprising finding. The relative presence of females aged 25 to 34 had a modest but significant positive relationship for the Nation and for two of the four regions.

Ecological characteristics. The rural-nonfarm white population exhibited the same strong negative association between fertility and proximity to SMSA's that was found for the rural-farm white population. This relationship held for the Nation as a whole and within each of the four regions. This portion of the rural population, like the rural-farm sector, appeared to respond in fertility behavior to the proximity to metropolitan areas.

Regional differences in the rural-nonfarm white population. The rural-nonfarm white population showed a greater homogeneity than the rural-farm white population among the regions insofar as the relationships examined were concerned. There were no differences among regions that could be identified as statistically significant.

Characteristics related to fertility differences among white urban communities

It was assumed that the same groups of socioeconomic, demographic, and ecological characteristics operative in rural communities would be associated with differences in fertility among urban communities. Therefore, similar regression equations were used, with the variables representing the factors for the urban populations instead of the rural populations. In general, the assumption that the same characteristics would be related to fertility differences appeared valid, inasmuch as the explanatory power of the urban equations was consistently as high or higher than for the rural populations. The findings are summarized in table V-3.

Table V-3.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO FERTILITY RATES OF WHITE FEMALES IN THE URBAN POPULATION, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

[In beta coefficients]

Selected characteristic[1]	United States	Northeast	North Central	South	West
SOCIOECONOMIC					
Education	[2]-.0912	.0065	-.0053	[2]-.2456	[2]-.4249
Family income	[2].0928	[2]-.5007	.0250	.0189	.0172
Female employment	-.0425	.0876	[2].0969	[2]-.1505	.0006
Female income	[2]-.1600	[2]-.3598	[2]-.2429	[2]-.0574	[2]-.2225
Farmers and farm managers	-.0098	[2]-.1256	-.0395	-.0183	[2].3365
Farm laborers and foremen	[2].2985	[2].1438	-.0297	[2].3147	-.0726
DEMOGRAPHIC					
Females aged 15 to 24 years	[2]-.3424	[2]-.1963	[2]-.4553	[2]-.2483	[2]-.2406
Females aged 25 to 34 years	[2].1014	.0459	.0364	[2].1532	[2].1169
ECOLOGICAL					
Proximity to SMSA and size	[2]-.2565	[2]-.3496	[2]-.3369	[2]-.2260	[2].2729
Multiple correlation coefficient	.5810	.6136	.6068	.7219	.7874

[1] The specific variables used for county population are: Median number of school years completed by males and females 25 years old and over; median family income; percentage of females 14 years old and over employed; median personal income of females; percentage of farmers and farm managers, farm laborers and farm foremen; percentage of ever-married women 15 to 44 who were aged 15 to 24 and 25 to 34; and proximity to standard metropolitan statistical area; and size.

[2] The regression coefficient was significantly different from zero at the .05 level.

Source: Computed from data in 1960 Census of Population.

Socioeconomic characteristics. The relationship between urban fertility levels of the white population and education was negative for the Nation and for two of the four regions, the South and West. In the Northeast and North Central Regions, it was not significant. At the national level, the association was not strong between fertility and education for the urban white population, but in the South and West it was important. There was no obvious reason why this relationship should have been more important in the regions where the average level of education among whites was highest.

For the urban as well as the rural population, there was a modest positive correlation at the national level between family income and fertility. There was only one region, however, in which this was significant for urban whites, namely the Northeast, in which a strong negative relationship between these two factors prevailed.

The relationship between female employment and fertility in the urban population was generally insignificant, except in the South where as expected it was a negative one. On the other hand, there was a significant negative relation between female income and the urban fertility levels for the Nation and each region. Thus, for urban areas outside of the South, it appeared that the level of income of employed females was more closely related to differences in fertility rates than was the proportion of females employed.

Given the minute proportion of farmers in the urban population, no significant relationship would be expected between the proportion of farmers and farm managers and urban fertility rates. This proved to be the case for the Nation as a whole and for the North Central and South Regions. In the Northeast, however, a significant negative relationship was found, and in the West, a strong positive one. The very small numbers of farmers and farm managers in the urban population indicated that these relationships were interrelated with something else, perhaps distance from large urban centers.

Much the same conclusion arose for the correlation between urban fertility and the proportion of farm laborers and farm foremen in the work force which was significant positively for the Nation and in the Northeast and the South. While this relationship was expected, it seemed largely coincidental in the urban white population.

Demographic characteristics. The proportion of urban white females 15 to 24 years old was significantly related to urban fertility at both the national and regional levels. As expected there was an important negative relationship in each case. However, contrary to expectation there was a positive relationship between the proportion of females 25 to 34 years of age and urban fertility for the Nation and for two of the four regions. This would indicate that, in certain urban areas, the increased prevalence of women in the middle years of the childbearing span increased the fertility level of the community.

Ecological characteristics. At the national level and in three of the four regions, there was a significant negative relationship between the proximity of the urban population to an SMSA and fertility level. However, in the West the relationship was positive and significant, the only instance where this situation appeared. Several explanations might be suggested for this unexpected positive relationship for the white urban population in the West. There may have been some spurious relationship between the proportion of the urban population employed as farmers and farm managers and the proximity variable which caused both to take an unexpected direction of association. Or, there may have been a correlation between city size and concentration of certain religious groups in the West that produced high birth rates near the largest urban areas. In any case relationship was unique and probably fortuitous.

Regional differences among urban populations. In general there were relatively few differences among the regions in terms of the relationship of the three groups of factors to fertility of the urban white population. The greatest differences were associated with the education variable, which was much more related to urban fertility in the South and West than elsewhere. Of the four regions, it seemed that the various characteristics most often had different impacts in the West than elsewhere, but was not at all clear that the statistical relationships in that region could be validly interpreted as representing true differences in terms of sociological or economic differences.

Characteristics related to fertility differences in the nonwhite population in the South

Since nonwhites make up a very small portion of the rural-farm population of regions outside of the South, the regression equations for nonwhites were run only for that region. A summary of the results for the three nonwhite residence components of this population is shown in table V–4.

Table V–4.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO FERTILITY RATES OF NONWHITE FEMALES IN THE SOUTH, BY RESIDENCE: 1960

[In beta coefficients]

Selected characteristic[1]	Rural farm	Rural nonfarm	Urban
SOCIOECONOMIC			
Education	[2]-.2016	[2]-.4081	[2]-.3832
Family income	[2]-.2973	[2]-.2501	[2]-.2167
Female employment	-.0729	[2]-.0578	[2].1107
Female income	-.0440	[2]-.0767	[2]-.1110
Farmers and farm managers	-.0513	[2].0628	[2].0980
Farm laborers and foremen	-.0168	.0505	.0218
DEMOGRAPHIC			
Females aged 15 to 24 years	[2]-.2925	[2]-.1810	[2]-.1762
Females aged 25 to 34 years	[2]-.1365	[2]-.0683	.0039
ECOLOGICAL			
Proximity to SMSA and size	-.0753	-.0250	-.0387
Multiple correlation coefficient	.4958	.5995	.5656

[1] The specific variables used for county population are: Median number of school years completed by males and females 25 years old and over; median family income; percentage of females 14 years old and over employed; median personal income of females; percentage of farmers and farm managers, farm laborers and farm foremen; percentage of ever-married women 15 to 44 who were aged 15 to 24 and 25 to 34; and proximity to standard metropolitan statistical area; and size.

[2] The regression coefficient was significantly different from zero at the .05 level.

Source: Computed from data in 1960 Census of Population.

Socioeconomic characteristics. For each of the three residence groups in the South—urban, rural-farm, and rural-nonfarm—there was a significant negative relationship between the educational level of adult nonwhites and the fertility level of the nonwhite community. As the level of education rose, the fertility in the community declined in each of the three groups. Also, as expected, a strong negative relationship between family income and fertility rates of nonwhites was found in all residence components.

The other socioeconomic characteristics were generally only weakly related to fertility levels. None of the strong relationships that were evident for whites in that region—between female employment, employment as farmers and farm managers, or employment as farm laborers and farm foremen, and fertility level—were evident for the nonwhite population. Thus, none of the exterior variables that measured occupational status appeared to be relevant for nonwhites; instead, the only relationships that were important seemed to be the educational and income characteristics.

Demographic characteristics. The two variables that related the age distribution of nonwhite females in the South to fertility rates were both negatively related to the fertility rate. Of the two, the proportion of females 15 to 24 years of age was by far the more important in its depressing effect upon fertility rates. These, of course, are characteristics of the population rather than of the communities in which they live.

Ecological characteristics. Among nonwhites in the South, there was no significant relationship between proximity to large urban areas and fertility. This was not entirely unexpected, assuming the dominance of whites in the South in all sectors of the economy. The social organization of the South, dominated as it has been by whites, permits little flexibility in roles to be played by nonwhites. Hence, while distance from large urban centers seemed to bring about differing forms of social structure and specialization which affected the fertility of whites, this did not occur among nonwhites. The failure to obtain the same relationship between proximity to SMSA's and fertility for nonwhites as for whites suggests dual organizational structures with separate communication networks. Thus, it would appear that norms, values, and styles of life which have implications for fertility behavior are distinct for whites and for nonwhites. Insofar as the urban white population is a pacesetter in these matters, channels of communication appear to be open for whites, but to be closed for nonwhites.

In general, the fertility rates of nonwhites in the South are primarily related to characteristics of the population—educational level, family income, and age—and not to variables such as employment and proximity to urban areas. It does not follow, however, that social structure and values have no impact upon nonwhite fertility rates. Rather it must be concluded that nonwhite fertility in the South is not related to the same factors as is white fertility, and thus many of the factors represented in our equations turned out to be relatively insignificant. Despite this, it should be noted that in general the R_2 for the equations for the nonwhites were as high as, or higher than, for the same residence group of whites, so that the results should not be ignored merely because only a few population characteristics were found to be associated with variance in nonwhite fertility levels.

Summary of regional comparisons

The effects of the proportion of ever-married females aged 25 to 34 and proximity to metropolitan centers were similar among all the regions in the three residence components. The effects of the various social and economic variables differed more among regions for the rural-farm and urban components than for the rural-nonfarm segment. However, the results of the regional comparison tests for all residence sectors did not conclusively support the initial hypothesis of differential effects. The ecological variable and age distribution measures of ever-married females, generally very important in the regression analyses in accounting

Table V–5.—SUMMARY OF THE RESULTS OF MULTIPLE COMPARISON TESTS AMONG REGIONS, BY RESIDENCE, FOR THE CONTERMINOUS UNITED STATES: 1960

Residence and region	Independent variable[1]								
	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{13}
RURAL FARM									
Northeast vs. North Central............	0	0	0	0	1	1	0	0	0
Northeast vs. South....................	0	0	0	0	1	0	0	0	0
Northeast vs. West.....................	0	0	0	0	0	0	0	0	0
North Central vs. South................	0	0	1	1	0	1	1	0	0
North Central vs. West.................	0	0	1	0	1	1	0	0	0
South vs. West.........................	0	0	0	0	1	0	1	0	0
RURAL NONFARM									
Northeast vs. North Central............	0	0	0	0	0	0	0	0	0
Northeast vs. South....................	0	0	0	0	0	0	0	0	0
Northeast vs. West.....................	0	0	0	0	0	0	0	0	0
North Central vs. South................	0	0	0	0	0	0	0	0	0
North Central vs. West.................	0	0	0	0	0	0	0	0	0
South vs. West.........................	0	0	0	0	0	0	0	0	0
URBAN									
Northeast vs. North Central............	0	0	0	0	0	1	0	0	0
Northeast vs. South....................	0	0	0	0	0	1	0	0	0
Northeast vs. West.....................	0	0	0	0	1	0	0	0	0
North Central vs. South................	0	0	0	0	1	0	1	0	0
North Central vs. West.................	1	0	0	0	1	0	0	0	0
South vs. West.........................	1	1	0	0	1	0	0	0	0

[1] The independent variables are: X_4 percent of males in labor force who are farmers and farm managers; X_5 percent males in labor force who are farm laborers and farm foremen; X_6 percent females 14 years old and over employed; X_7 median female personal income; X_8 median years of school completed by males and females 25 years old and over; X_9 median family income; X_{10} percent ever-married females 15 to 44 years old who are 15 to 24 years old; X_{11} percent ever-married females 15 to 44 years old who are 25 to 34 years old; X_{13} proximity to standard metropolitan statistical area; and size. "1" denotes that there is a significant difference between the regression coefficients of the independent variable for the two sectors compared; "0" denotes that there is no significant difference between the regression coefficients of the two sectors compared.

Source: Computed from data in 1960 Census of Population.

for differences in fertility levels, revealed relatively homogeneous effects among the geographical regions of the conterminous United States, as indicated by table V–5. However, family income level and educational levels were also relatively important in the individual regression analyses, but these two measures seemed to exert differential effects on fertility levels in the geographical regions, at least for the rural-farm and urban sectors. Thus, whereas the multiple comparison tests were not impressive with respect to differences among regions, the fact that educational and family income levels showed differential effects on fertility levels among the regions provided some support to the initial hypothesis of differential effects.

Residential differences in factors affecting fertility

This section deals with the testing of the third general hypothesis presented at the beginning of this chapter. The hypothesis states that fertility levels vary among residential sectors of the population because different factors have differing influence upon fertility levels within the residential sectors. Whereas the previous section considered whether these factors had significantly different effects on fertility levels among geographic regions, the focus here is upon a comparison of their effects on fertility among the three residence groups. An example of the kind of question posed here would be whether the effect of the educational level upon fertility level is the same for the rural-farm population as for the rural-nonfarm and the urban populations.

In a sense, this section attempts to test the validity of the census classifications of residence, but with respect to only one dimension, fertility and factors related to it. It might be stated that if the census classification of residence groups is a meaningful one, then we would expect to discover significant differences in the way the various independent variables in the analysis affect fertility levels within these residence categories. If no differences are observed, it suggests the need for the refinement or replacement of the traditional categories with a more useful classification. Multiple comparison tests are employed to test this general hypothesis. A description of these statistical tests can be found in the appendix. Table V–6 summarizes the results of the multiple comparison tests for the conterminous United States and the four geographic regions. Results for the nonwhites are also presented for the South. The table presents the results of the test for rural-farm versus rural-nonfarm, rural-farm versus urban, and rural-nonfarm versus urban.

The Conterminous United States

The results as shown in table V–6, generally supported the hypothesis of different effects among the residence groups at the national level. In very few cases were the effects of the independent variables on fertility the same among the three residence categories. Only the proportion of farmers and farm managers in the labor force had a similar effect on fertility levels in all three groups. However, this variable was the least important of all nine variables in determin-

Table V–6.—Summary of the Results of Multiple Comparison Tests Among Residential Sectors, by Regions, for the Conterminous United States: 1960

Residence and region	Independent variable[1]								
	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{13}
CONTERMINOUS UNITED STATES									
Rural farm vs. rural nonfarm............	0	1	1	1	1	1	1	0	0
Rural farm vs. urban....................	0	1	1	0	1	1	1	1	1
Rural nonfarm vs. urban.................	0	1	1	1	1	1	1	1	1
NORTHEAST									
Rural farm vs. rural nonfarm............	0	1	1	1	0	1	1	0	1
Rural farm vs. urban....................	1	0	0	0	0	0	0	1	1
Rural nonfarm vs. urban.................	0	0	1	1	0	1	1	1	1
NORTH CENTRAL									
Rural farm vs. rural nonfarm............	0	1	0	1	1	1	1	0	1
Rural farm vs. urban....................	0	1	0	0	1	0	0	0	1
Rural nonfarm vs. urban.................	0	0	0	1	1	0	1	0	0
SOUTH									
White									
Rural farm vs. rural nonfarm............	0	1	1	0	1	0	1	0	0
Rural farm vs. urban....................	1	1	1	0	1	1	1	1	0
Rural nonfarm vs. urban.................	1	1	1	1	1	1	0	1	0
Nonwhite									
Rural farm vs. rural nonfarm............	1	0	0	0	0	1	1	0	0
Rural farm vs. urban....................	1	0	1	0	0	1	1	1	0
Rural nonfarm vs. urban.................	1	0	1	0	1	1	0	1	0
WEST									
Rural farm vs. rural nonfarm............	1	0	0	0	1	0	1	0	0
Rural farm vs. urban....................	1	1	0	0	1	1	0	1	0
Rural nonfarm vs. urban.................	1	0	1	1	0	1	0	1	0

[1] The independent variables are: X_4 percent of males in labor force who are farmers and farm managers; X_5 percent males in labor force who are farm laborers and farm foremen; X_6 percent females 14 years old and over employed; X_7 median female personal income; X_8 median years of school completed by males and females 25 years old and over; X_9 median family income; X_{10} percent ever-married females 15 to 44 years old who are 15 to 24 years old; X_{11} percent ever-married females 15 to 44 years old who are 25 to 34 years old; X_{13} proximity to standard metropolitan statistical area; and size. "1" denotes that there is a significant difference between the regression coefficients of the independent variable for the two sectors compared; "0" denotes that there is no significant difference between the regression coefficients of the two sectors compared.

Source: Computed from data in 1960 Census of Population.

ing fertility levels. On the other hand, five of the independent variables revealed significant differences in their effects among the residence groups: proportion of farm laborers and farm foremen, female employment rate, level of education, family income level, and proportion of ever-married females aged 15 to 24. While their effects were different in the rural-farm, rural-nonfarm, and urban populations, these five variables were of major consequence to fertility rates.

The effect of proximity of the community to metropolitan centers was the same for both rural sectors and was the only major determinant of fertility which did not show a differential effect among the three residence groups. The proximity variable ranked second for the rural-farm and first for the rural-nonfarm population in terms of relative importance in explaining fertility differences. Further, the ecological position of a community exerted a greater effect on fertility levels in both rural population sectors than in the urban. On the other hand, the proportion of married women in the age group 15 to 24 had a significantly greater effect in determining fertility levels in the urban than in the two rural groups. Levels of both education and family income were major determinants of fertility levels in the rural areas and the test results indicated that their effects were significantly different in all three residence groups.

The difference among the residence classifications at the national level must be emphasized. The fact that the hypothesis of differential effects at this level was supported argues for the introduction of a census residence classification that differentiates more clearly between the rural and urban populations.

The Northeast Region

In contrast to the national results of the multiple comparison tests, results shown in table V–6 suggest that the residence classification was less important in the Northeast Region than it was at the national level. Only one variable indicated a difference in effect of fertility levels among all the residence groups, that being proximity to metropolitan centers. In terms of its relative importance in accounting for fertility differences this variable ranked first for the rural residence categories and third for the urban. Educational level was the only factor which revealed a similar effect on fertility for all residence categories, but in all cases, this variable was not a significant factor.

A pattern which stands out in the Northeast is the apparent dissimilarity of the effects that a large number of the independent variables have on fertility levels in the comparison of the rural-nonfarm and rural-farm sectors and the urban and rural-nonfarm sectors. Surprisingly, the rural sectors in this region were relatively dissimilar. The effects of family income level, female income level, proportion of married females aged 15 to 24, female employment, and proportion of farm laborers and farm foremen in the labor force were significantly different between the rural-farm and rural-nonfam sectors. Urban and rural-nonfarm differed significantly on almost the same variables except the last. Such a pattern, however, may not be so unexpected when the degree of urbanization of the Northeast is considered. The rural-nonfarm population in the Northeast probably reflects a heavily suburban character, and, as such, may be different from the rural-nonfarm population in other regions. Long-time, emerging suburban patterns reflect another dimension in population differentiation, so that the traditional rural-urban dichotomy is not the only meaningful distinction. In more urbanized regions, the urban-suburban dichotomy must also be considered.

The North Central Region

As in the Northeast, the North Central Region revealed fewer differences of effect on fertility among the independent variables than did the Nation. This suggests that as areas become relatively more homogeneous, the residence classification reveals less significant differences within the population. Only educational level revealed a differential effect on fertility throughout the residence components. In terms of relative importance with respect to explaining fertility differences, it ranked first and second, respectively, in the rural-farm and rural-nonfarm sectors, but for the urban population it did not significantly affect fertility levels.

There were three variables in the analysis which produced similar effects in fertility levels among the residence components: proportion of farmers and farm managers in the labor force, female employment, and proportion of married women aged 25 to 34. Generally, however, these variables were not major determinants in any of the equations. It is interesting that while the same independent variables were major determinants of fertility levels in both rural sectors, their effects on fertility were not similar. On the other hand, variables which revealed similar effects were generally those which were not significant, or which exerted little influence on fertility levels among the residence groups.

In summary, the greatest contrast between residence categories in the North Central Region occurred between the rural-farm and rural-nonfarm populations. Six of the nine independent variables indicated a difference in effect on fertility between these two residential components: proximity to metropolitan centers, proportion of married females aged 15 to 24, family income level, level of education, female income level, and proportion of farm laborers and farm foremen. Each of these variables showed a greater influence on fertility levels in the rural-farm sector than in the rural-nonfarm segment. The rural-farm versus rural-nonfarm contrast followed, to some extent, the same pattern as in the Northeast. However, the rural-nonfarm and urban populations revealed few differerences, whereas in the Northeast the differences are numerous.

The South

White fertility. Factors related to white fertility in the South—in comparison to the other regions—portrayed a relatively large number of differences among the residence groups. This suggests that perhaps the rural-urban classification at the regional level is more applicable to the differences in the South than in any of the other geographic regions. Three factors—level of education, female employment rate, and proportion of farm laborers and farm foremen—affected fertility levels in significantly different ways among the residence groups. Each was a relatively major determinant of fertility rates in each of the sectors. One variable, proximity to metropolitan centers, had a similar effect on fertility in all of the residential sectors. This was in direct contrast to both the Northeast and North Central Regions. The implication is that in the more urbanized regions, metropolitan influence affects fertility levels in varying ways whereas

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in the less urbanized regions it is similar in its effects on rural-farm, rural-nonfarm, and urban fertility.

Unlike the Northeast and North Central Regions, the South presented a pattern of greater homogeneity in the rural-farm and rural-nonfarm sectors (table V–6). Five of the nine independent variables showed like effects on fertility levels in the two sectors. Furthermore, by contrasting each of the rural sectors with the urban population, it can be seen that the more significant residence group comparison was between the rural and urban. Seven of the nine independent variables for the comparison of both rural-farm with urban and rural-nonfarm with the urban affected white fertility in significantly different ways. This evidence adds further support to the notion that the residential classification of the census is more useful when applied to the less urbanized geographic regions.

Nonwhite fertility. The data for nonwhites in the South, also presented in table V–6, indicate that except for the West, this region had the fewest differences among residence groups. In other words, for nonwhites in the South, the census categories of residence were, in a relative sense, least appropriate in that rural-farm nonwhites differed little from rural-nonfarm or urban nonwhites with respect to the influence of factors affecting fertility. An inviting interpretation is that a nonwhite subculture exists which overrides differences that might otherwise be generated by residence differences. There were actually only three variables in this region which revealed similar effects on fertility levels among all residence sectors. These factors were proportion of farm laborers and farm foremen, female income level, and proximity to metropolitan centers. Two variables showed different effects for all three residence groups: family income level and proportion of farmers and farm managers.

The contrast between rural-farm and rural-nonfarm factors related to fertility was very slight among nonwhites in the South. In this sense, the nonwhite analysis followed, to a certain extent, the pattern of whites in the South. Insofar as there were differences among residence categories, five of the nine independent variables in the rural-farm versus urban and rural-nonfarm versus urban comparisons indicated significant differences in their effects on fertility. The pattern of greatest contrast, therefore, appeared to be that of rural versus urban. Again, as stated above, the idea is substantiated that where there is relatively less urbanization, the dichotomy of rural versus urban is more meaningful.

The West

The analysis of the West, comparable to that of the South, was characteriz by few differences in the effects of the independent variables on fertility leve of the residence classes. At the regional level, these results provided little suppo for the hypothesis of differential effects between the two rural sectors (tabl

V-6). The variables which had effects on fertility that differed between the rural-farm and rural-nonfarm sectors were proportion of ever-married females aged 15 to 24, level of education, and proportion of farmers and farm managers in the labor force. The proportion of ever-married females in the age group 15 to 24 was first in rank of relative importance in explaining fertility levels for the rural-farm population, whereas levels of education was most important in accounting for fertility differences within the rural-nonfarm population. The proportion of farmers and farm managers, however, showed a negative relationship in this residence group but positive in the rural-nonfarm sector.

Similar to the pattern of the South, the proportion of farmers and farm managers in the labor force in the West was the only variable showing differential effects on fertility levels for all residence components, but proximity to metropolitan centers exerted like effect on fertility for all residence groups, as in the South for both whites and nonwhites.

The comparison of greatest contrast for the West appeared to be the combined rural sectors versus urban, although the pattern of variation was as slight as that for nonwhites in the South. In the comparison of both rural-farm versus urban and rural-nonfarm versus urban, five of the nine independent variables revealed significant differences in their effects on fertility levels.

Summary of residential comparisons

A number of conclusions can be made on the basis of the multiple comparison tests between residence components.

First, at the national level, the hypothesis of differential effects of the independent variables was clearly substantiated. Generally, the hypothesis was also supported for the regional level, although to a lesser extent in the South and West Regions. Compared to the multiple comparison tests among regions the residential comparisons were more favorable to the differential effects hypothesis. Consequently, the argument can be made that the residence classification was a useful and meaningful one at the national and regional levels with respect to the dimension of fertility. Moving from the national level to the regions, and consequently to more homogeneous populations, the differences generated by the residence categories were somewhat fewer. It would seem, therefore, that there were regional differences in the composition of the residence categories, e.g., the social and economic structure of the rural-nonfarm population in the South was not the same as that of the comparable group in the Northeast.

Second, from the discussion of the comparison tests at the regional level, the generalization can be made that in the more urbanized areas, such as the Northeast and North Central Regions, the greatest contrast with repect to factors affecting fertility levels was between the rural-farm and rural-nonfarm populations. In the less urbanized regions, the South and West, the greatest contrast was between the combined rural sectors and the urban sector. The proportion of the population classified as urban in the Northeast was 80 percent; in the North Central, 69 percent; in the South, 59 percent; and in the West, 78 percent. However, if the degree of urbanization were measured on the basis of the number of counties characterized by a high proportion of urban population, the South and West would clearly be the least urban of the four geographic regions. In light of this comparison, it seems that the traditional dichotomy of rural and urban is much more appropriate for the less urbanized regions. In the more urbanized regions, it appears that this general classification is not meaningful, but that other dimensions of contrast should be applied, such as suburban versus urban.

Third, while the multiple comparison tests at the regional level revealed a relatively large number of cases where the effects of the independent variables were similar, these cases generally appeared among the variables which were not the major determinants of fertility levels. In other words, in the cases where the hypothesis of differential effects did not hold up, the variables were usually not significant in their effect on fertility levels, or if they were significant, other variables were generally of more importance in explaining fertility differences. As a result, more consideration should be granted the variables of higher relative importance in interpreting the results of the multiple comparison tests. If the interpretation followed this procedure, the result would be that even at the regional level the residence groups would tend to show a relatively large number of cases of factors significally different with respect to their effect on fertility for all residence groups. This statement, then, supports the retention of some residence classification as a meaningful dimension for measuring differences in a population.

Finally, table V-6 indicates a pattern which is easily recognizable. In the more urbanized regions, the Northeast and North Central, the proximity to metropolitan centers had a different relationship to fertility for the three components of the population, whereas in the less urbanized regions, the South and West, this variable revealed similar effects on fertility for all three sectors. What the data seem to point out is the necessity of differentiating between metropolitan and urban influences as expressed initially by Bogue in *The Structure of the Metropolitan Community.*[16] The concept of the metropolitan community emphasizes the effect of metropolitan influence in producing a nonrandom distribution of population characteristics. In this case, if metropolitan dominance does exist, the characteristics of the population which influence fertility in the metropolitan region, e.g., income level, educational level, female employment level, age distribution, etc., would tend to portray patterns of distinct differentiation. rather than of random distribution of these characteristics or extreme homogeneity of the population. Because factors which influence fertility levels are not randomly distributed in the metropolitan region by residence category, these levels would tend to be clearly differentiated by residence sector within metropolitan regions. With this in mind, the results of the analysis are not as surprising.

Because of the nonrandom distribution of characteristics, the effects of the independent variables should be different where metropolitan influence is the predominant pattern. In the South the influence of metropolitan centers is not as clearly defined or as effective as in the Northeast or the North Central Regions. In a sense, therefore, this situation supports the underlying hypothesis of this monograph, that of metropolitan dominance.

Summary and conclusions

This chapter has attempted to provide an understanding of the relationship between certain population characteristics and fertility levels in the conterminous United States. The material presented goes beyond the descriptive data of chapter IV which documented the collective differences in fertility rates among the rural-farm, rural-nonfarm, and urban residence components. Selected techniques of statistical analysis have been used to furnish insights into the relationships of fertility and certain socioeconomic, demographic, and ecological measures. This analysis has provided new information with respect to factors associated with differences in fertility levels. While the analysis has raised more questions than it has answered, some general conclusions do emerge.

At the outset of this chapter, three general hypotheses were stated. The first hypothesis asserted that differences in fertility levels among communities can be explained, in part, in terms of certain socioeconomic, demographic, and ecological characteristics of the communities and their populations. In general, this hypothesis was supported by the statistical analysis. In most of the regression equations, the proportion of the variance in community fertility levels for the Nation and regions explained by the independent variables selected for the analysis were relatively high. Furthermore, in almost every case, the regional analyses revealed higher proportions of variance explained than in the national analysis. Contrary to expectation, the independent variables had their greatest influence with respect to urban fertility, intermediate influence on rural-nonfarm fertility, and least influence on rural-farm fertility.

In most cases, the variables revealed a significant relationship to fertility in the various equations. Most of the nine independent variables had significant effects on fertility in all of the residence components of the Nation. At the regional level there were differences in terms of the factors which indicated significant effects, but generally, the regional analyses added significantly to the information obtained from the national analysis. In terms of relative importance in accounting for differences in fertility levels, the ecological measure of proximity to metropolitan centers proved to be of greatest significance. One of the demographic measures of age distribution, proportion of ever-married females aged 15 to 24, was also a major determinant in accounting for fertility variation. In contrast, the other measure of age distribution of married females (ages 25 to 34) proved to be relatively insignificant.

Although the socioeconomic characteristics of the population were relatively of less importance than the ecological and demographic measures, the two variables, level of education and family income level, were consistently important in most of the regression equations. Female employement rate and female income level indicated relatively minor effects on fertility levels and were frequently found not to be significant. Finally, the two measures of agricultural occupational distribution were of least importance. In addition, the proportion of farmers and farm managers in the work force consistently exhibited relationships the reverse of these expected, and except for family income at the national level, was the only one of the nine independent variables which consistently revealed a relationship to fertility levels opposite of that hypothesized.

The second hypothesis predicted that the selected factors employed in the regression analysis would have different effects upon fertility levels in the various geographic regions of the conterminous United States. Clearly this hypothesis was not supported. In a sense, the multiple comparison tests provided a test of the capacity of the regions to produce meaningful differences within the population with respect to one dimension: how certain factors relate to community fertility levels. Of the three residence groups which were compared interregionally, the rural-nonfarm component revealed the fewest distinctions among the regions. The results, therefore, strongly suggest a reconsideration of the utility of the regional classification and/or a realignment of the boundaries of the regions within the Nation.

Finally, the third hypothesis dealt with residential comparisons in terms of the factors affecting fertility. Again, the multiple comparison tests provided a means of testing the residence classification scheme used by the Bureau of the Census. The results of the tests generally supported the validity of the residence classification in terms of producing meaningful differences as well as favorable support to the research hypothesis. Differential effects among the residence components were found to be strongest at the national level, and, although slightly less obvious, relatively strong at the regional level. Among the regions, differential effects seemed to be slightly correlated with stage of urbanization within a region. For the more urbanized Northeast and North Central Regions, the greater comparison was between the rural sectors. For the South and West, the comparison of interest was between the rural sectors and the urban. It would appear that with an increasing degree of urbanization, a simple rural versus urban contrast would be less meaningful. However, on the basis of the results, the fact that the census categories of residence reflected meaningfully different classes of the population would encourage the continued use of this classification, at least in fertility analysis.

Some implications

A decline in the difference in fertility rates between the rural and urban population has been noted in chapter IV. On the basis of the relationships obtained in this analysis, it appears that these differences are likely to continue to narrow in the future.

Educational levels appear to be one of the population characteristics most closely related to fertility levels. And, as we shall see in the next chapter, there has been a substantial closing of the gap between rural and urban populations in years of school completed by young adults. We shall also see that school enrollment in rural areas is no longer appreciably below that in urban areas, at least up to about age 16, so that in the future there may be an even smaller difference in the educational level of rural and urban populations.

Another factor which will tend to reduce the fertility level in the rural-farm population is the age distribution of females. The relative scarcity of females due to migration will tend to depress rural-farm birth rates.

Still another force likely to work toward lower fertility levels in the rural-farm population is the expectation of a continued decline in number of farm laborers, in an absolute as well as a relative sense, as a part of the rural-farm population. This appears to be the occupational group in rural areas which for one reason or another is associated with high fertility levels. Therefore, as the number of persons employed in this low-status occupation declines, we may expect the fertility level to decline also.

A final factor which should contribute to a decline in differences in the urban and rural fertility rates is the continued spread of the influence of metropolitan areas. As matters now stand this influence is likely to lead to further declines in rural fertility rates causing them to approach those of the urban population.

The relationships between rural population and community characteristics serve to highlight the circular nature of the poverty problem in many isolated rural areas. Remote rural areas in which the population has low levels of education and family income, and few opportunities for female employment, are those in which fertility levels are high. These high fertility levels in turn mean more children in educational systems that generally lack an adequate economic base and are often inferior for other reasons. They also insure a continuing excess supply of labor of a type not likely to attract industry. Low family incomes, low female employment, and high fertility rates, in turn, persist for another generation. A tremendous out-migration is necessary to maintain the level of welfare in such communities. Probably only some outside social or economic force can break this cycle. To devise programs within a democratic society which will break this cycle remains one of the more difficult tasks of our time.

NOTES

6

[1] For an overview, codification, and/or evaluation of work in the area of differential fertility see: Charles Westoff, "The Changing Focus of Differential Fertility Research: The Social Mobility Hypothesis," *Milbank Memorial Fund Quarterly,* vol. XXXI (January 1953), pp. 24 and 25; United Nations, Department of Social Affairs, *The Determinants and Consequences of Population Trends* (New York: United Nations, 1953), chapter 5, pp. 71–97; Ronald Freedman, "The Sociology of Human Fertility: A Trend and Bibliography," *Current Sociology,* vols. 10 and 11, No. 2 (1961-62), pp. 35–119; and David Goldberg, "Some Recent Developments in American Fertility Research" in National Bureau of Economic Research, *Demographic and Economic Change in Developed Countries* (Princeton: Princeton University Press, 1960), pp. 137–151.

[2] For results of the divisional analysis see A. B. Andarawewa, "An Economic Analysis of Fertility Differentials Among Rural-Farm Communities in the United States in 1960." Unpublished Ph. D. thesis, Department of Agricultural Economics, Michigan State University, 1964.

[3] For details of the statistical tests employed in analyses and for the detailed statistical results, see the appendix.

[4] Donald J. Bogue, *The Population of the United States* (Glencoe: The Free Press, 1959), pp. 311–318; Wilson H. Grabill, Clyde V. Kiser, and P. K. Whelpton, *The Fertility of American Women* (New York: John Wiley and Sons, Inc., 1958), pp. 198–238; Clyde V. Kiser, "Differential Fertility in the United States" in National Bureau of Economic Research, *Demographic and Economic Change in Developed Countries* (Princeton: Princeton University Press, 1960), pp. 77–113; Clyde V. Kiser, "Changes in Fertility by Socio-economic Status During 1940–1950," *Milbank Memorial Fund Quarterly,* vol. XXXI (October 1955); and David Goldberg, "The Fertility of Two Generation Urbanites," *Population Studies,* vol. 12 (March 1959).

[5] Kiser, "Changes in Fertility by Socio-economic Status 1940–1950," *op. cit.,* p. 417.

[6] Goldberg, *op. cit.,* pp. 214–222.

[7] Grabill *et al., op. cit.,* pp. 131–132, 136.

[8] Donald J. Bogue, *op. cit.,* p. 311.

[9] G. C. Becker, "An Economic Analysis of Fertility," *Demographic and Economic Change in Developed Countries* (Princeton: National Bureau of Economic Research, 1960), pp. 209–231.

[10] R. Freedman, P. K. Whelpton, and A. A. Campbell, *Family Planning, Sterility and Population Growth* (New York: McGraw-Hill Book Company, 1959), p. 155.

[11] I. Adelman, "An Econometric Analysis of Population Growth," *American Economic Review,* vol. LIII, No. 3 (June 1963), pp. 314–339.

[12] Freedman *et al, op. cit.,* p. 302.

[13] Grabill *et al., op. cit.,* p. 264.

[14] 1960 Census of Population, vol. I, *Characteristics of the Population,* Part 1, United States Summary, p. 213, table 82.

[15] The numbers that are shown in tables V–1 through V–4 are the beta coefficients computed from the regression equations. The relative magnitude of the numbers is an indication of the relative contribution that the variance in that variable made toward explaining the variance in the dependent variable (fertility rates). The sign of the number signifies its relationship to the dependent variable and the asterisk signifies whether the relationship was statistically significant. For *additional* detail see the appendix.

[16] Donald J. Bogue, *The Structure of the Metropolitan Community* (Horace H. Rackman School of Graduate Studies, University of Michigan, 1950).

CHAPTER VI

EDUCATIONAL STATUS

Introduction

The process of educating the younger generation is of concern in all societies. In simple societies, the transmission of skills along with the complex of knowledge and beliefs comprising the cultural heritage is usually accomplished within kinship and peer groupings. In more complex societies, the transmission of knowledge and skills is accomplished largely by extrafamilial institutions. In contemporary American society, formal education and specialized skills have become increasingly important prerequisites for entering the labor force. These requirements appear to be equally significant for all sectors of the society, whether rural or urban. In the United States, the farm population has consistently been characterized by a lower level of educational attainment than the urban population. The concentration of the occupational aspirations of farm youth on jobs requiring little formal education together with their lack of training and skills useful in the urban labor market have consequences for the entire society. Special interest in such problems as school dropouts, retardation, and quality of teachers is symptomatic of the growing importance and function of education for both rural and urban sectors of American society.[1]

The general purpose of this chapter is to describe the educational status of the rural population in 1960. Of special interest are the following questions: What patterns of school enrollment and educational attainment are found in the rural-farm, rural-nonfarm, and urban residence groups of the United States? What variations exist between regions and divisions of the Nation? To what extent do the measures of educational status produce typical patterns by residence? Are such patterns true for both whites and nonwhites? And finally, is educational attainment in the rural-farm population associated with distance from the nearest standard metropolitan statistical area?

This chapter relies upon two types of information regarding educational status from the decennial census. The first body of data relates to school enrollment and the second concerns the level of educational attainment, both pertaining to the various segments of the population, whether in or out of school.[2]

School enrollment

Data on school enrollment in 1960 for the United States, including Alaska and Hawaii, showed that about 53 percent of all persons aged from 5 to 34 years were enrolled in school. The percentage of males enrolled was higher than that

Table VI-1.—Percent of Rural and Urban Populations Enrolled in School by Single Years of Age, Color, and Sex, for the United States: 1960

[Includes data for Alaska and Hawaii]

Age	Percent white enrolled in school						Percent nonwhite enrolled in school					
	Rural farm		Rural nonfarm		Urban		Rural farm		Rural nonfarm		Urban	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total, 5 to 34 years	59.9	59.2	52.4	50.5	56.0	50.3	61.1	60.7	53.2	54.3	54.1	48.9
5 years	24.5	25.4	31.6	31.8	52.4	52.5	17.3	17.9	21.2	22.2	52.2	53.1
6 years	73.5	73.7	76.9	77.5	87.5	87.8	65.0	67.1	67.5	68.4	83.4	83.9
7 years	96.8	96.8	96.6	96.8	97.6	97.7	91.3	92.8	92.4	93.2	95.6	95.8
8 years	97.9	97.8	97.6	97.8	98.2	98.2	94.9	95.6	95.1	95.6	96.9	96.9
9 years	98.1	98.2	97.7	97.9	98.3	98.3	95.5	96.2	96.0	96.1	96.9	97.3
10 years	98.0	98.0	97.6	97.9	98.2	98.3	95.3	96.4	95.8	96.2	96.9	96.9
11 years	97.8	97.9	97.5	97.8	98.1	98.2	95.2	96.0	95.1	96.2	96.7	96.8
12 years	97.6	97.7	97.2	97.5	97.9	98.0	94.7	95.4	94.2	95.3	96.3	96.4
13 years	96.8	97.2	96.5	96.9	97.5	97.4	92.8	93.9	93.1	94.0	95.7	95.5
14 years	94.9	95.4	94.8	94.9	96.4	96.1	89.9	91.3	89.4	91.1	93.7	93.2
15 years	92.1	93.3	91.8	91.7	94.8	94.0	84.7	86.1	84.5	86.2	91.1	88.8
16 years	85.0	89.1	84.5	84.8	89.0	87.4	74.6	79.7	75.9	77.9	83.4	80.7
17 years	77.8	81.5	72.1	73.8	79.6	76.0	64.4	68.6	63.1	66.1	70.0	66.3
18 years	51.5	49.1	45.7	41.4	59.8	48.2	48.3	52.8	45.3	47.2	50.2	42.3
19 years	24.0	17.4	24.9	17.9	45.0	32.2	33.4	32.5	27.3	29.2	32.1	27.3
20 years	12.0	8.8	15.9	9.7	35.9	23.0	17.4	17.3	15.8	15.7	21.1	17.1
21 years	8.8	6.2	12.9	6.7	30.5	16.7	11.0	10.5	11.5	11.0	16.1	12.9
22 years	6.4	4.0	9.4	3.8	23.2	8.3	7.2	6.8	8.6	7.2	12.2	8.3
23 years	5.6	3.1	7.7	2.9	19.0	5.3	7.2	5.2	7.6	5.9	11.2	6.0
24 years	5.1	2.9	7.1	2.6	16.4	4.3	4.7	3.9	6.2	4.3	9.4	5.5
25 to 29 years	3.7	2.8	5.6	2.3	11.1	3.2	3.7	3.6	5.0	3.8	7.9	4.4
30 to 34 years	2.1	2.4	2.9	2.0	4.5	2.3	2.9	2.8	3.1	2.8	4.3	3.4

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 165.

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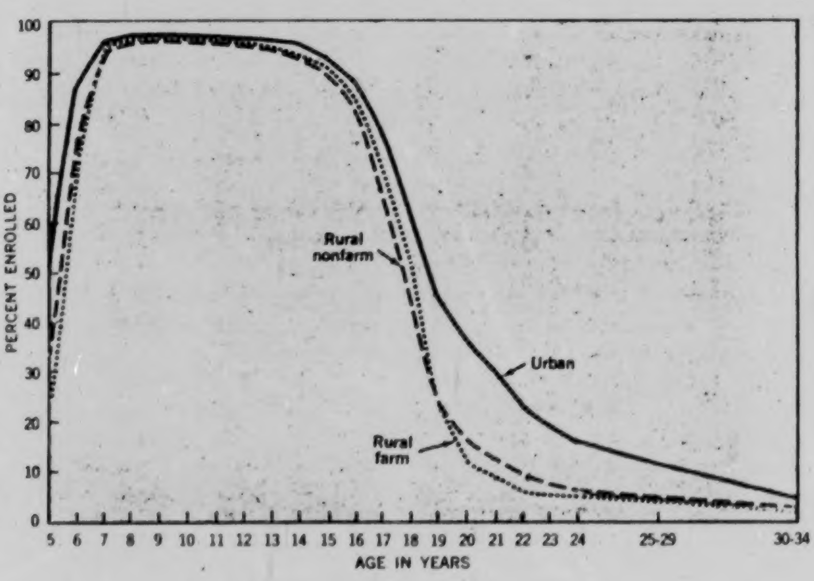
for females (55.3 and 51.0, respectively); that of whites was higher than that of nonwhites (53.2 and 52.7, respectively); and the percentage of rural-farm persons higher than that of urban or rural-nonfarm persons (59.7, 52.9, and 51.7, respectively).

It is clear these summary data on enrollment are affected by enrollment rates and age distribution within the 5- to 34-year age span. Further, it must be recalled that college students in 1950 and 1960 were enumerated where they lived while attending college, whereas earlier they were usually enumerated at their parental home. It is necessary, therefore, to examine school enrollment by single years of age for each residence category, classified by color and sex, as presented in table VI-1. The age pattern of school enrollment for white males, classified by residence, is shown graphically in figure VI-1.

Figure VI-1.—Percent White Males Enrolled in School, by Residence and Age, for the Conterminous United States: 1960



Source: Table VI-1.

An age pattern was clearly evident in the proportions enrolled in school. While parts of the pattern represented a response to statutes compelling school attendance, others were a response to alternative choices regarding the use of time. Briefly, the curve of school enrollment within the ages 5 to 34 was one of rapid rise up to ages 8 or 9, followed by a high but slightly declining enrollment through ages 14 or 15, and then followed by a rapidly declining enrollment throughout the remainder of the age span.

While this same generalized age pattern held true of males and females and whites and nonwhites, several qualifications should be made. Males, as compared with females, generally were enrolled in smaller proportions at the earlier years of the age range (up to age 14) but were enrolled in larger proportions in later years. Whites, as compared with nonwhites, were generally enrolled in larger proportions. Some exceptions occur at ages 19 and 23, and 30 to 34.

As measured by proportions enrolled in school at each age, the two rural residence groups generally lagged behind the urban group in each color and sex category. The percentages enrolled in school from the rural-farm category were generally higher than those for the rural-nonfarm group. Rural-farm white males had more enrolled in school than the rural-nonfarm group for every age from 7 through 18 (fig. VI–1). For white females, the same situation held from age 9 through 18 and at each age after 22. In fact, the rates of rural-farm white females enrolled in school were higher than either rural-nonfarm or urban white females at ages 16 to 18 and 30 to 34. Among nonwhite males, the proportions enrolled in school were higher for those with rural-farm than with rural-nonfarm residence at ages 11 and 12, 14 and 15, and 17 through 20, and among nonwhite females, the same situation existed at ages 9 and 10, 12 and 14, and 16 through 20.

The favorable position of rural-farm in relation to rural-nonfarm youth in 1960 with respect to school enrollment may be due to numerous conditions. The reduced need for manpower in agriculture in itself may have served to keep farm youth in school. The higher enrollment for rural-farm youth may reflect the effectiveness of educational programs by the Cooperative Extension Service and other farm organizations concerning labor force trends and occupational requirements. It may also be that the relationship between education and adjustment outside of agriculture has been sufficiently internalized by farm people so that no other alternative to the problem is considered. In addition, the favorable position of farm over rural-nonfarm enrollment rates may be due to the location of institutional populations. Prisons, reformatories, mental hospitals, and diagnostic and reception centers, often located in rural-nonfarm areas and adding to the overall population, would tend to depress school attendance rates in this residence category.

The relatively high proportion enrolled in school at all ages in the urban white population is conspicuous in table VI–1. Urban white males at every age from 13 through 15 and from 18 to 34 were enrolled in school at higher rates than any other residence, color, or sex group. Rural-farm and rural-nonfarm males were enrolled in school in the smallest proportions at most ages from 5 through 17.

Throughout the regions and divisions, percentages enrolled in school for all age groups tended to be higher in the urban than in the rural populations (see table VI-2 for data on regions, and appendix table A-14 for comparable data for divisions). Furthermore, with the exception of the 5- and 6-year-olds and the group 20 to 34, rural-farm enrollment rates usually exceeded rural-nonfarm rates. Differences among the residence groups at ages 7 to 13 enrolled in school were very small.

Table VI-2.—PERCENT ENROLLED IN SCHOOL, BY AGE GROUPS, FOR THE RURAL AND URBAN POPULATIONS, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and residence	Percent enrolled by age group					
	5 and 6 years old	7 to 13 years old	14 and 15 years old	16 and 17 years old	18 and 19 years old	20 to 34 years old
UNITED STATES						
Rural farm	48.1	97.2	93.0	81.8	38.9	4.2
Rural nonfarm	52.8	97.1	92.6	77.8	34.0	4.8
Urban	69.4	97.8	96.9	82.0	45.2	9.0
NORTHEAST						
Rural farm	63.9	98.3	94.0	80.8	32.9	2.9
Rural nonfarm	66.3	97.8	96.5	81.7	36.2	4.4
Urban	77.0	97.5	96.9	81.8	44.1	8.8
NORTH CENTRAL						
Rural farm	56.6	98.2	95.8	87.3	36.8	3.4
Rural nonfarm	59.0	97.8	94.8	82.7	35.1	4.2
Urban	78.9	98.1	95.4	83.6	45.9	8.7
SOUTH						
Rural farm	39.3	96.0	90.1	76.2	39.4	4.8
Rural nonfarm	41.0	96.3	90.1	72.4	32.6	4.9
Urban	50.3	97.4	93.3	78.5	44.8	8.5
WEST						
Rural farm	50.3	97.6	96.1	88.9	49.5	5.7
Rural nonfarm	59.8	97.4	95.0	82.0	34.4	6.3
Urban	75.4	98.3	96.3	85.1	46.7	10.6

Source: Retabulated and computed from data in 1960 Census of Population.

Among 5- and 6-year-old children, the proportion enrolled in school was greatest in urban areas and lowest in rural-farm areas for all regions and all divisions except the East South Central. Differences between residence groups were usually very large. For the Nation as a whole, the percentages of urban, rural-nonfarm, and rural-farm children of these ages enrolled in school were 69, 53, and 48, respectively. The proportions of these children enrolled in school were lowest for each residence category in the three southern divisions and in the Mountain Division of the West. In the rural-farm population, the proportion of these children ranged from 36 percent in the West South Central to 66 percent in the Middle Atlantic Division. In the rural-nonfarm population, the low and high figures (38 and 68 percent) were found in the same two divisions. However, in the urban population, the proportion of 5- and 6-year-old children enrolled in school ranged from 47 percent in the West South Central to 80 percent in the Pacific Division.

For children from 7 to 13 years old, rates of enrollment tended to be highest in urban and lowest in the rural-nonfarm areas, but the differences were very small. In the Nation as a whole, the percentages enrolled at these ages were 97.8, 97.1, and 97.2, respectively, for the urban, rural-nonfarm, and rural-farm residence groups. In each of the residence categories, enrollment rates were low in the South and in each of the three southern divisions. In addition, they were relatively low for urban youth in the Middle Atlantic States and for rural-nonfarm youth in the Mountain Division. In the rural-farm sector the proportion of this group enrolled in school ranged from a low of 95.7 percent in the South Atlantic Division to a high of 98.5 percent in New England. In four divisions (New England, Middle Atlantic, East North Central, and West North Central) the percentage of rural-farm youth 7 to 13 enrolled in school either equaled or exceeded that of the urban and rural-nonfarm youth.

Enrollment rates for the 14- and 15-year-old group declined from the level of the previous age group, due at least in part to failure to continue with high school education. Rates for this group tended to be highest in urban areas and lowest in the rural-nonfarm residence category. In the conterminous United States, the percentages of 14- and 15-year-old persons enrolled in school in urban, rural-nonfarm, and rural-farm areas were 94.9, 92.6, and 93.0, respectively. In all three residence categories, enrollment rates were low in the South. In the rural-farm population, the enrollment for this age cohort ranged from slightly more than 89 percent in the East South Central to about 97 percent in the Pacific Division. The latter percentage was high for the Nation, exceeding that of all urban and rural-nonfarm sectors. The enrollment rates of rural-farm youth in this age group exceeded urban and rural-nonfarm rates in New England, the East North Central, West North Central, and Pacific Divisions.

Enrollment rates for 16- and 17-year-olds showed marked declines from the previous age group and reflected school dropout prior to the completion of high school. Proportions of youth in this group enrolled in school generally were lowest in rural-nonfarm sectors. Rural-farm and urban rates tended to differ slightly and to maintain about the same relatively high level. The enrollment percentages for youth in this age group for the Nation as a whole were urban, 82.0; rural nonfarm, 77.8; and rural-farm, 81.8 percent. Their enrollment rates were low in each residence group in the South Atlantic and East South Central Divisions. Rates among the rural-farm youth ranged from a low of approximately 74 percent in the South Atlantic Division to a high of about 90 percent in the Pacific Division, and exceeded those of urban and rural-nonfarm sectors in all divisions except the Middle Atlantic, South Atlantic, and East South Central.

Attendance in the final year of high school and the initiation of education beyond high school is reflected by the enrollment rates for youth 18 and 19

The rates for persons 20 to 34 years of age indicated primarily enrollment in college or other advanced training. Due to enumeration procedures which assigned students to the places where they lived while attending college, residence comparisons at these age levels are difficult, if not impossible, to interpret in the absence of additional information. For the Nation as a whole, the percentages of 18- and 19-year-old persons enrolled in school for the urban, rural-nonfarm, and rural-farm sectors were approximately 45, 34, and 39 percent, respectively. Comparable proportions for persons 20 to 34 years old were about 9, 5, and 4 percent, respectively. Due, at least in part, to the enumeration procedures and the concentration of universities in urban places, proportions enrolled in school for both age categories were usually highest in the urban areas of all divisions. However, in rural-farm areas persons 18 and 19 years old were enrolled in school in the highest proportions of the three residence categories within the West South Central and Pacific Divisions.

Educational attainment

School years completed by the population 25 years old and over. This portion of the chapter examines years of school completed by adults who are 25 years old and over, the vast majority of whom are no longer in school. We first examine percentage distributions by number of years of school completed, classed as follows: none, four levels of elementary school, one to three years and four years of high school, and one to three years and four or more years of college. These distributions will be examined by sex and color for each of the residence categories (table VI-3 and fig. VI-2 and VI-3).

Levels of educational attainment were generally highest for urban, intermediate for rural-nonfarm, and lowest for rural-farm populations. This ranking held true for whites and nonwhites of both sexes. The levels were generally higher for whites than nonwhites of both sexes in all residence categories, and were higher for females than males regardless of color or residence, if judged on the basis of high school graduation. Except for urban nonwhite females, however, larger percentages of men than women attended and/or graduated from college and postgraduate work.

For white males, the differential in educational attainment by residence was clear-cut. If we use the proportion of white males completing eight grades or less (including those with no years of school), the differential among white males residing in rural-farm, rural-nonfarm, and urban areas was large, 59, 48, and 35 percent, respectively. Similarly, if we use the proportion of white males completing 4 years of high school or more, the rural-farm, rural-nonfarm, and urban proportions were 27, 34, and 46 percent, respectively. The residential differential for white females is similar to that for white males. However, two differences should be noted. The differences between residence groups were slightly narrower for females than males, and white female attainment was higher than that of white males when the two attainment levels are used.

For nonwhite males, the differential in educational attainment by residence is also clear-cut, but differences between the two rural residence groups are somewhat less great than in the white population. Proportions of nonwhite males completing eight grades or less (and including no schooling) are 88, 78, and 57 percent, respectively, for rural-farm, rural-nonfarm, and urban residence groups. Corresponding percentages of nonwhite males completing 4 years of high school or more are approximately 5, 10, and 23, respectively, for the three residence groups. The residential differential for nonwhite females is similar to that for nonwhite males. Nonwhite female attainment, however, is higher than nonwhite male attainment, as measured here (table VI-3 and figs. VI-2 and VI-3).

Table VI-3.—Percent of Persons 25 Years Old and Over by Years of School Completed, Residence, Color, and Sex, for the Conterminous United States: 1960

Residence, color, and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
RURAL FARM										
Male:										
White	100.0	1.9	8.6	9.8	9.7	28.5	15.0	19.1	4.7	2.7
Nonwhite	100.0	12.5	40.2	19.0	8.6	7.8	6.7	3.6	1.0	0.7
Female:										
White	100.0	1.2	5.1	7.7	7.6	24.3	17.2	25.2	8.4	3.3
Nonwhite	100.0	7.6	25.3	22.4	12.7	11.8	11.7	5.6	1.5	1.0
RURAL NONFARM										
Male:										
White	100.0	2.2	7.9	9.0	8.4	20.5	18.2	20.5	6.5	6.8
Nonwhite	100.0	11.6	31.7	17.0	8.7	9.4	11.3	6.5	1.9	1.7
Female:										
White	100.0	1.6	5.4	7.8	7.1	19.3	19.7	26.8	7.9	4.4
Nonwhite	100.0	8.2	23.5	19.0	11.2	11.4	14.2	7.9	2.1	2.4
URBAN										
Male:										
White	100.0	1.9	4.4	6.2	5.7	16.6	19.6	23.0	10.4	12.3
Nonwhite	100.0	4.9	16.9	13.8	8.4	13.4	19.4	13.8	5.3	4.1
Female:										
White	100.0	2.0	3.7	5.7	5.0	16.7	19.9	30.2	10.0	6.8
Nonwhite	100.0	3.5	12.6	13.0	8.6	13.8	22.3	17.2	5.1	3.9

Source: Retabulated and computed from data in 1960 Census of Population.

The differential in educational attainment according to residence is apparent in each of the four regions of the Nation (appendix table A-15). As reflected by the two levels of completion—eight grades or less (including no years in school) and 4 years or more of high school—the expected differential is apparent for white males in all regions, and for white females in all regions except the Northeast, where rural-nonfarm white females show higher completion levels than the urban white females.

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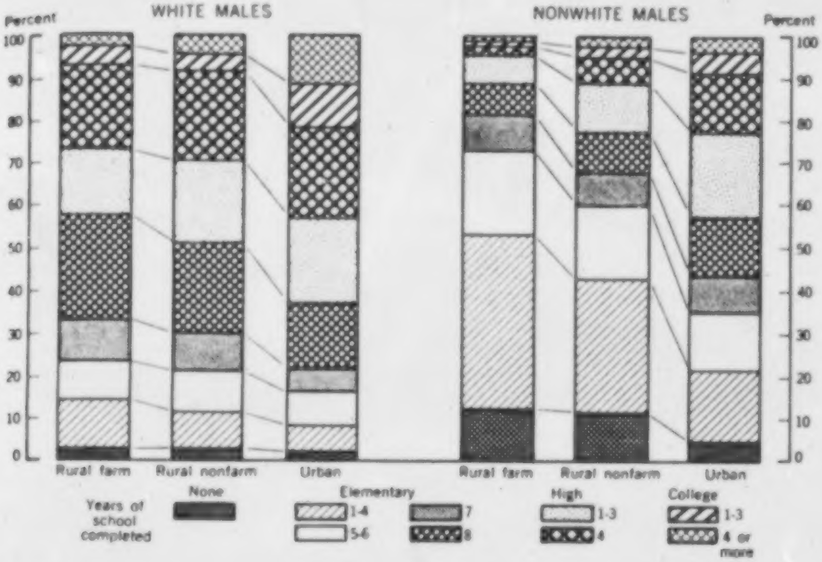
FIGURE VI-2.—PERCENT OF MALES 25 YEARS OLD AND OVER BY YEARS OF SCHOOL COMPLETED, BY RESIDENCE AND COLOR, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Table VI-3.

The residential differential in educational attainment is more marked in all regions for white males than for white females. Furthermore, differences among the residence groups in attainment levels of whites are greater in the more highly rural than in the more urban portions of the Nation. In the South, for example, the proportions of rural-farm, rural-nonfarm, and urban males aged 25 and over who completed 4 years of high school or more were approximately 20, 28, and 47 percent, respectively. In the Northeast, the comparable proportions for the three residence groups were approximately 30, 38, and 42 percent, respectively.

Regional differences in educational attainment within each residence category were substantial. Proportions of rural-farm white males completing 4 years or more of high school ranged from 37 percent in the West to 20 percent in the South. The comparable range for rural-farm white females was from 49 in the West to 27 in the South. Similar differences were to be found in the rural-nonfarm and urban sectors of the regions. Based upon this same completion measure, educational attainment was highest in all residence groups and for both sexes in the West. It was lowest in the rural sectors and for both males and females in the South. It was lowest among urban males and females in the Northeast.

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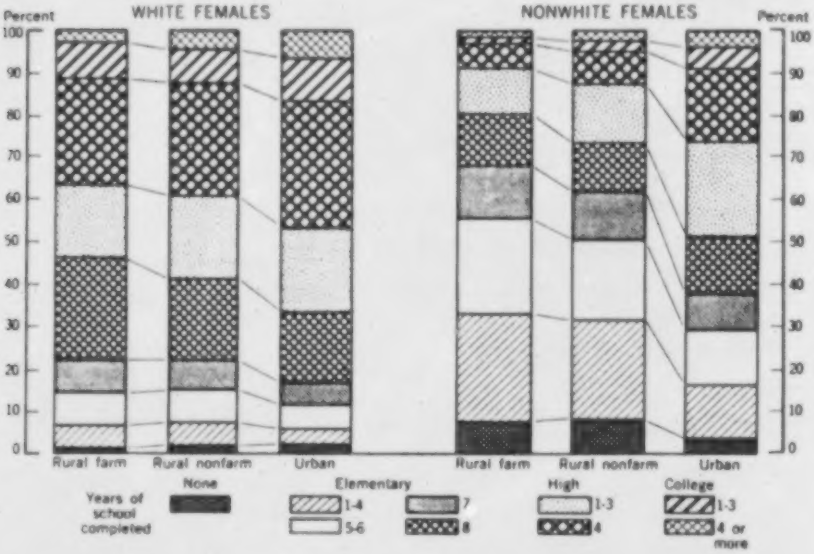
Figure VI-3.—Percent of Females 25 Years Old and Over by Years of School Completed, by Residence and Color, for the Conterminous United States: 1960



Source: Table VI-3.

The expected residential differential in overall educational attainment among nonwhites was evident in the South. Since nonwhites are underrepresented in the rural categories of the other two regions, systematic comparisons will not be made. Among nonwhites of both sexes in the South, attainment levels are extremely low for those residing in rural areas. Approximately 90 percent of all rural-farm nonwhite males have not progressed beyond the eighth grade level. Less than 4 percent of nonwhite rural-farm males completed 4 years of high school or more. Somewhat higher levels of schooling prevailed among female nonwhites in all residence categories.

The rural-farm and rural-nonfarm categories of nonwhites are reversed in the West. In the West, nonwhites, which include larger numbers of Indians and Orientals than the South, are characterized by substantially higher attainment levels than Southern nonwhites. It should be noted that about one-fifth of all rural-farm nonwhites in the West, both male and female, reported having had no schooling, but at the same time, more than one-fourth of the same group had completed 4 years of high school or more. Levels of schooling completed by persons 25 years old and over for the divisions, by residence, color, and sex in 1960 are found in appendix table A-16.

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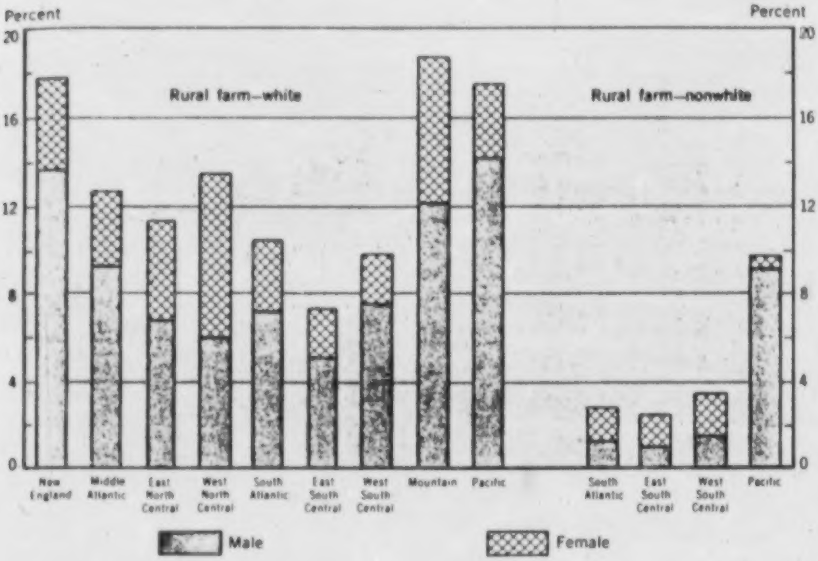
There are large interdivisional differences in the proportions of the rural-farm population having completed at least one year of college (fig. VI–4). At one extreme, only about 5 percent of the rural-farm males in the East South Central Division had completed one year or more of college and at the other, approximately 14 percent in the Pacific Division had done so. In each division, the proportion of rural-farm females reporting this level of attainment exceeded that of rural-farm males.

Figure VI–4.—PERCENT RURAL-FARM MALES AND FEMALES 25 YEARS OLD AND OVER COMPLETING ONE OR MORE YEARS OF COLLEGE, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Table A–16.

Except in the New England and Pacific Divisions, few nonwhites have had any college education. As among whites, nonwhite females having this level of education exceeded nonwhite males, except in the Pacific Division.

Median number of school years completed. The median [3] educational level of the population 25 years old and over of the United States, including Alaska and Hawaii, in 1960 was 10.6 years. As measured by the median number of school years completed, females had higher attainments than males (10.9 as compared with 10.3 years), and whites had higher attainments than nonwhites (10.9 as compared with 8.2 years). In all color and sex groups, the median level of attainment for persons 25 years old and over were highest in the urban, intermediate in the rural-nonfarm, and lowest in the rural-farm population. These

Table VI-4.—MEDIAN YEARS OF SCHOOL COMPLETED AND PERCENT IN AGE GROUP OF PERSONS 25 YEARS OLD AND OVER BY RESIDENCE, COLOR, AND SEX, FOR THE UNITED STATES: 1960

[Includes data for Alaska and Hawaii]

Sex and age	Rural farm				Rural nonfarm				Urban			
	White		Nonwhite		White		Nonwhite		White		Nonwhite	
	Percent in age group	Median school years completed	Percent in age group	Median school years completed	Percent in age group	Median school years completed	Percent in age group	Median school years completed	Percent in age group	Median school years completed	Percent in age group	Median school years completed
MALE												
25 years and over	100.0	8.7	100.0	4.8	100.0	9.3	100.0	5.8	100.0	11.2	100.0	8.5
25 to 29 years	7.1	12.1	9.5	7.0	11.4	12.1	12.9	8.7	11.2	12.5	13.3	11.1
30 to 34 years	8.5	11.0	9.0	6.2	12.6	11.5	12.4	7.8	12.3	12.4	14.0	10.3
35 to 39 years	10.3	10.5	10.0	5.7	12.7	11.4	11.9	7.2	12.9	12.3	14.1	9.7
40 to 44 years	11.4	9.2	11.1	5.2	11.6	10.6	10.9	6.4	11.9	12.1	12.2	8.7
45 to 49 years	12.7	8.8	12.7	4.9	10.9	9.4	10.8	5.6	11.1	11.3	11.2	8.1
50 to 54 years	11.8	8.6	11.6	4.7	9.5	8.8	9.5	5.1	9.9	10.4	9.5	7.4
55 to 59 years	10.8	8.4	10.9	4.3	8.1	8.5	8.7	4.4	8.7	9.1	8.6	6.7
60 to 64 years	9.1	8.3	7.8	4.1	6.6	8.4	6.2	4.1	7.2	8.8	5.9	6.1
65 to 69 years	7.5	8.2	7.4	3.8	6.1	8.2	6.3	3.6	5.9	8.5	4.8	5.3
70 to 74 years	5.4	8.1	4.7	3.7	4.8	8.0	4.7	3.4	4.4	8.3	3.2	5.0
75 years and over	5.5	7.8	5.2	3.3	5.7	7.7	5.7	3.0	4.6	8.2	3.2	4.4
FEMALE												
25 years and over	100.0	9.7	100.0	6.5	100.0	10.3	100.0	6.9	100.0	11.5	100.0	8.9
25 to 29 years	7.7	12.2	10.4	8.3	11.7	12.2	12.5	9.5	10.4	12.4	13.9	11.5
30 to 34 years	9.6	12.1	11.0	7.8	12.6	12.1	12.5	8.7	11.5	12.3	14.7	10.9
35 to 39 years	11.4	12.0	12.3	7.2	12.6	12.1	12.0	7.9	12.3	12.3	14.2	10.2
40 to 44 years	12.3	10.9	12.3	6.9	11.2	11.3	10.8	7.3	11.4	12.2	12.2	9.1
45 to 49 years	12.6	10.1	12.4	6.5	10.4	10.4	10.6	6.8	10.7	11.6	10.8	8.5
50 to 54 years	11.4	9.2	10.6	6.3	9.1	9.5	9.2	6.4	9.6	10.7	8.9	8.1
55 to 59 years	10.2	8.8	9.4	5.8	8.0	8.8	8.5	5.7	8.6	9.6	8.0	7.4
60 to 64 years	8.3	8.6	7.0	5.4	6.8	8.6	6.6	5.1	7.5	8.9	5.7	6.8
65 to 69 years	6.7	8.4	6.3	4.7	6.3	8.4	6.8	4.5	6.6	8.6	4.8	6.1
70 to 74 years	4.6	8.3	3.9	4.5	5.0	8.3	4.8	4.3	5.1	8.5	3.2	5.7
75 years and over	5.3	8.2	4.5	3.8	6.4	8.2	5.7	3.7	6.2	8.5	3.5	5.0

Source: 1960 Census of Population, Vol. 1, *Characteristics of the Population*, Part 1, United States Summary, table 173.

differences in medians point to the importance of controlling for color and sex when examining median levels of attainment for the three residence groups. For example, that segment of the population having a large proportion of white females would probably have a higher median attainment level than a population having a large proportion of nonwhite males. Since the educational attainment level has been rising rapidly, the age structure is another factor of great importance in determining educational differences. This is especially true of differences among residence groups.

In all residence groups, the median number of school years completed declined with increasing age (table VI–4). To select an extreme case, for instance, the median level of schooling for urban nonwhite males aged 25 to 29 was 11.1 and for those 75 and over the median was only 4.4.

The relative position of the three residence groups with respect to educational attainment as measured by the median for persons 25 years of age and over is due in part to age distribution. There is an inverse relationship between age and years of schooling, and the relatively low median of the rural-farm population is due in part to the fact that proportions of both white and nonwhite rural-farm males were larger than respective urban groups for each age group after 45. Proportions of rural-farm white females were larger than their urban counterparts for each age group from 40 to 64; the same situation prevailed for rural-farm nonwhite females, for all age groups after 40. The median educational level for the rural-nonfarm sector was affected to a lesser degree by its age structure than the level for the rural-farm group.

Considerable variation in educational attainment was reported for the rural-farm population of the conterminous United States (table VI–5). High levels characterized the rural-farm population of the West and low levels prevailed in the South. Levels in the Pacific Division were exceptionally high. The median level for rural-farm whites was especially high in the Mountain and New England Divisions.

The most recently educated of the rural-farm residents—those who were between 25 and 29 in 1960—exhibited the highest median levels of schooling (table VI–4). Each successive age group shown in this figure possessed markedly lower median levels. Except for one age group, rural-farm white males showed larger differences in relation to the 25 to 29 age group than white females or either of the nonwhite groups.

If we assume the 25- to 29-year age group in 1960 represents the current generation of farm males, then the 55- to 59-year age group may be used to represent the generation of parents. The parental generation of rural-farm white males had an average of 3.2 years of schooling less than the present generation. The comparable figure was less for rural-farm females and for rural-farm nonwhites of both sexes. The generational difference as estimated in this way was also less for rural-nonfarm and urban males.

Table VI-5.—MEDIAN YEARS OF SCHOOL COMPLETED BY THE RURAL-FARM POPULATION 25 YEARS OLD AND OVER, BY COLOR, SEX, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median years of school completed			
	White		Nonwhite	
	Male	Female	Male	Female
United States	8.7	9.7	4.7	6.5
Regions:				
Northeast	8.9	10.5	[1]6.6	[1]8.2
North Central	8.8	10.5	7.5	8.3
South	8.2	8.8	4.6	6.4
West	9.8	11.9	8.0	9.2
Divisions:				
New England	9.6	11.7	[2]8.8	[2]8.6
Middle Atlantic	8.9	10.3	6.5	8.2
East North Central	8.9	10.3	8.1	8.6
West North Central	8.8	10.7	7.1	8.1
South Atlantic	8.0	8.9	4.5	6.5
East South Central	8.1	8.6	4.6	6.4
West South Central	8.5	9.1	4.7	6.5
Mountain	9.9	12.0	5.4	4.1
Pacific	9.8	11.7	9.2	10.8

[1] Based upon fewer than 2,000 persons.
[2] Based upon fewer than 200 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

The rural-farm versus urban difference in median level of educational attainment of white males in 1960 was only one-half or less in the 25-to-29-age group and in all age groups beginning at 60. The difference was very large for ages 40 to 44, 45 to 49, and 50 to 54. While rural-farm versus urban differences among white females were smaller than for males, the same pattern was present. Thus, rural-farm versus urban differences for the white population were small at older ages, relatively large at ages 40 to 54, and relatively small at the younger ages. In the nonwhite population, however, this differential was greatest at the younger ages and decreased with increasing age.

The evidence presented suggests a substantial upgrading in the educational attainment of the rural-farm white population. Rural-farm versus urban differences among nonwhites remained very large. However, the data did not take into account migration from one residence category to another although they were directly affected by the educational characteristics of migrants over many years.

Median number of school years completed in relation to distance from nearest standard metropolitan statistical area

The general hypothesis of metropolitan dominance led to the expectation that rural-farm populations would exhibit consistently decreasing levels of educational attainment as distance from an SMSA increased. Selective migration and the resulting age structure in rural areas, it was reasoned, would contribute to this expected decrease. On the other hand, it was also assumed that proximity

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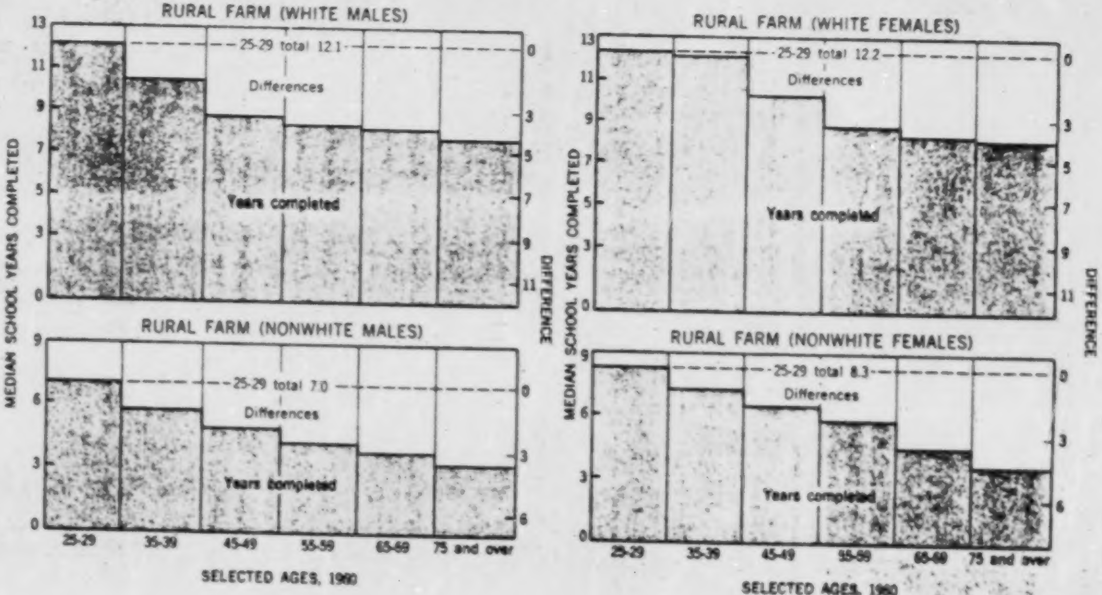
Figure VI-5.—DIFFERENCES IN MEDIAN SCHOOL YEARS COMPLETED BY SELECTED AGE GROUPS OF THE ADULT RURAL-FARM POPULATION IN RELATION TO THE AGE GROUP 25 TO 29, BY COLOR AND SEX, FOR THE CONTERMINOUS UNITED STATES: 1960



Source: Table VI-4.

to institutions of higher learning, highly concentrated in larger cities and metropolitan areas, and an increased rate of interaction and contact with urbanites, would serve to raise educational levels of the rural-farm population near SMSA's.

However, a computation of the median level of school years completed for the rural-farm population, by color and distance from the nearest SMSA failed to support these assumptions at the national level (table VI–6).

Table VI–6.—MEDIAN YEARS OF SCHOOL COMPLETED, BY RURAL-FARM WHITE MALES AND FEMALES 25 YEARS OLD AND OVER, BY DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division and sex	Inside SMSA counties	Distance from nearest SMSA[1]					
		Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 to 249 miles	250 miles or more
MALE							
United States	8.9	8.8	8.6	8.7	9.0	9.4	8.8
New England	10.4	10.0	9.8	8.9	8.9	-	8.8
Middle Atlantic	8.8	8.9	8.9	8.8	8.4	-	-
East North Central	9.0	9.0	8.7	8.5	8.4	8.3	-
West North Central	8.9	8.9	8.8	8.7	8.8	9.0	8.7
South Atlantic	8.6	7.9	8.0	7.7	-	-	-
East South Central	8.6	8.1	8.1	8.3	-	-	-
West South Central	8.7	8.4	8.4	8.5	9.0	-	-
Mountian	9.9	11.7	9.6	9.8	10.2	9.8	9.6
Pacific	9.5	10.5	9.5	10.3	10.7	10.2	9.7
FEMALE							
United States	10.5	9.8	9.2	9.6	11.7	12.1	11.6
New England	12.0	11.6	12.0	11.1	10.7	-	10.5
Middle Atlantic	9.7	10.5	10.7	10.3	8.8	-	-
East North Central	10.7	10.9	9.6	8.9	8.9	9.2	-
West North Central	11.0	11.5	10.8	9.5	11.2	12.1	11.0
South Atlantic	9.8	8.8	8.8	8.5	-	-	-
East South Central	9.3	8.6	8.5	8.8	-	-	-
West South Central	10.0	9.1	9.0	9.1	11.4	-	-
Mountain	11.7	12.2	12.0	11.9	12.1	12.1	12.1
Pacific	11.3	12.1	11.5	12.1	12.1	12.1	11.9

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

The median level of schooling completed by rural-farm white males and females in the Nation as a whole failed to show a decrease associated with increasing distance from an SMSA. Due to the high representation of the Mountain and Pacific Divisions in the most distant bands where levels of schooling were high, it was more approriate to examine relationship patterns at divisional levels. A decline in the median with increasing distance was most evident in the New England, East North Central, and South Atlantic Divisions for rural-farm males and females. The anticipated decline in median level of schooling in relation to distance was not apparent for either white males or females in most of the divisions of the Nation. The rank order correlation is negative in two divisions for males and in four divisions for females.

The median level of schooling completed by rural-farm nonwhites, both males and females, generally was relatively high in SMSA counties, relatively low in the next two distance bands, and then high again in the most distant band (table VI-7). Due to the small number of nonwhites in the divisions comprising the Northeast and North Central Regions, and very small numbers at distances of 150 miles or more, the relationship between level of schooling and distance is shown for only five divisions. Nonwhite rural-farm males and females in the South Atlantic and East South Central Divisions were characterized by higher median levels in the SMSA counties than in any of the more distant bands. Rural-farm nonwhite adults—males and females—residing from 100 to 149 miles from an SMSA in the West South Central Divsion had higher median levels than those within the SMSA. Lowest medians in this division occurred for both males and females within 50 miles of an SMSA and from 50 to 99 miles away. For nonwhites in the Mountain and Pacific Divisions, the median level for the SMSA counties was surpassed by the level in one or more of the distance bands. In general, the expected decrease in educational attainment with increasing distance was not evident for nonwhites.

Table VI-7.—Median Years of School Completed, by Rural-Farm Nonwhite Males and Females 25 Years Old and Over, by Distance From Nearest Standard Metropolitan Statistical Area, by Selected Divisions, for the Conterminous United States: 1960

Selected divisions[1] and sex	Inside SMSA counties	Distance from nearest SMSA[2]		
		Less than 50 miles	50 to 99 miles	100 to 149 miles
MALE				
United States	5.8	4.6	4.6	4.9
South Atlantic	5.1	4.5	4.4	4.9
East South Central	5.0	4.6	4.7	4.5
West South Central	5.2	4.7	4.7	6.2
Mountain	7.4	8.6	6.7	6.6
Pacific	9.5	7.9	10.4	8.2
FEMALE				
United States	7.2	6.5	6.5	6.6
South Atlantic	6.9	6.4	6.4	6.8
East South Central	6.6	6.3	6.4	6.1
West South Central	6.8	6.2	6.5	7.6
Mountain	7.0	9.8	8.1	6.1
Pacific	10.5	11.9	12.0	9.2

[1] Rural-farm nonwhites are not sufficiently numerous in the divisions of the Northeast or North Central Regions, nor in the more distant bands of the divisions shown, to warrant inclusion in this table.

[2] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Changes in educational status, 1950–1960

School enrollment rates, as well as attainment levels, of the American population have risen steadily during the past half century. Especially rapid changes have occurred in the past decade. The percentage of those between the ages of 5 and 24 who were enrolled in school rose from about 63 percent in 1950 to about

72 percent in 1960 for the conterminous United States. During the same period, the median number of school years completed by persons 25 and over rose from 9.3 in 1950 to 10.6 in 1960. As measured by median number of school years completed, the gain was higher for nonwhites than for whites.

The rise in school enrollment rates in the rural-farm population during the past decade has been impressive. The increase in enrollment at most ages has been greater than in comparable ages in the rural-nonfarm and urban populations. Enrollment rates for rural-farm youth aged 7 to 13 in 1950 and in 1960 were 94.7 percent and 97.2 percent, respectively. The comparable figures were 95.5 and 97.1 percent for rural-nonfarm youth and 96.1 and 97.8 percent for urban youth. Similarly, changes in proportions enrolled in school were greater for rural-farm youth 14 to 19 years old than for comparable age groups in the rural-nonfarm and urban populations. While some part of the rural-farm change during the decade may be due to low enrollments in 1950 compared to those of other residence categories, part of the increased enrollment can be attributed to the change in rural-farm definition.

An analysis of educational attainment in 1950 and 1960 indicates that differences among residence categories expanded rather than contracted during the decade. Despite an increase in median number of school years completed for each residence group and for both whites and nonwhites, differences among residence groups were as large in 1960 as in 1950, or were larger. The median number of school years completed in 1950 and 1960 for rural-farm, rural-nonfarm, and urban populations were 8.4 and 8.8; 8.8 and 9.5; and 10.2 and 11.1, respectively.

While all residence categories and both whites and nonwhites 25 years old and over showed an upgrading in number of school years completed, rural residents lagged behind the urban group. The lag was especially apparent in the rural-farm population and at the higher levels of attainment. While 3.0 percent of rural-farm whites 25 years old and over in 1960, had completed 4 years or more of college, the comparable 1950 figure was 2.4 percent. The proportions for urban whites, on the other hand, were 9.4 and 7.7 percent in 1960 and 1950. College-educated nonwhites showed relatively greater concentration, as well as greater gain, in urban areas than did whites.

Summary

Rural residents, whites and nonwhites of both sexes, generally lagged behind urban residents of the United States in 1960 in school enrollment despite the high levels shown by the rural-farm sector. Proportions of rural-farm persons enrolled in school were usually higher than proportions for comparable ages in the rural-nonfarm population, and at certain ages even exceeded those in the urban population. For the rural-farm group the rate of school enrollment of white females in 1960 was especially high in relation to other residence categories, the percentage exceeding that of the comparable group in the rural-nonfarm sector from age 9 through 18 and at each age after 22, and exceeding urban percentages at ages 16, 17, and 18 and from 30 to 34.

The relationship between school enrollment and age was much the same for all residence groups. The general pattern was one of rapid increase in proportions enrolled up to ages 8 or 9, and high but slightly declining proportions throughout the rest of the school age span. At most ages, whites were enrolled in larger proportions than nonwhites, and females more so than males, except after age 18 or 19.

The pattern of educational attainment for the adult population 25 years old and over in the United States was markedly different for the three residence categories. The level of attainment was clearly lowest for the rural-farm residents, intermediate for the rural-nonfarm residents, and highest for the urban residents. Such differences were generally true of whites and nonwhites of both sexes. Regional variations in the level of educational attainment showed that rural-farm whites in the West had more schooling than those of other regions, and those in the South generally exhibited the lowest attainment levels. Rural-farm nonwhites in the South shared extremely low levels of attainment.

The median level of schooling completed by the rural-farm population showed little relation to distance from the nearest SMSA. The expected decline in attainment with increasing distance was clear-cut for rural-farm white males in only two of the nine divisions.

The relatively high level of school enrollment at most ages in the rural-farm population in 1960 and the increase in enrollment rates for this population in the decade were impressive. A part of this change doubtless was due to definition changes, but it was almost certainly also a recognition of the need for education as a prerequisite of the nonfarm labor market. All residence categories reported higher median numbers of school years completed during the last decade.

NOTES

[1] Eleanor H. Bernert, *America's Children* (New York: John Wiley and Sons, Inc., 1958); James D. Cowhig, *School Dropout Rates Among Farm and Nonfarm Youth: 1950 and 1960*, Economic Research Service, Agricultural Economic Report No. 42 (Washington, D.C., September 1963); James D. Cowhig, *Age-Grade School Progress of Farm and Nonfarm Youth,* 1960, Economic Research Service, Agricultural Economic Report No. 40 (Washington, D.C., August 1963); James D. Cowhig, *Education, Skill Level, and Earnings of the Hired Farm Working Force of 1961*, Economic Research Service, Agricultural Economic Report No. 26 (Washington, D.C., March 1963); and "Educational Change in a Generation," *Current Population Reports*, Series P-20, No. 132 (September 22, 1964).

NOTES—Continued

[7] The data on school enrollment in the 1960 census were obtained from answers to the following questions: "Has he attended regular school or college at any time since February 1, 1960? If he has attended only nursery school, business or trade school, or adult education classes, check 'No.' If 'Yes,' Is it a public school or a private school?" Answers to these questions were recorded for persons 5 to 34 years of age.

The data on years of school completed were derived from answers to the following questions in the 1960 census: "What is the highest grade (or year) of regular school this person has ever attended? If now attending a regular school or college, check the grade (or year) he is in. If it is in junior high school, check the box that stands for that grade (or year) he attended." Both questions were asked for all persons 5 years of age and over.

[8] The median number of school years completed is defined as the number which divides the population group into two equal parts, one-half completing more and one-half less schooling than the median.

CHAPTER VII

EMPLOYMENT OF RURAL PEOPLE

Introduction

The distribution of occupations within a nation's labor force and the industrial distribution of employment of that labor force are often taken as measures of the economic development of an economy. Areas within the Nation in which a high proportion of the labor force is engaged in agriculture, forestry, and fisheries often are considered "less developed" than those in which a small proportion of the labor force is so engaged. This classification, of course, tends to be misleading at both national and international levels, but it is accurate to say that the economic and social structure of an area is related to its occupational and industrial structures.

The shift in employment from farm and field to factory and office entails more than a mere change in occupation. The role and responsibility of family labor change as parents move from self-employment to wage and salary jobs in nonfarm industries. Whereas on farms there might be a short-run economic advantage in having children leave school to work on the farm, in nonfarm wage employment there is little such incentive. Thus, attitudes regarding family size, educational attainment of children, and labor force participation by family members are related to the occupation of the head of the household.

There are certain problems in dealing with the census statistics relating to occupation and industry, especially insofar as the rural-farm population is concerned. First, the statistics refer to the occupation and industry of employment during the week prior to the enumeration, which was not the same date for everyone. Second, the classifications allow only one occupation or industry per person, although it is known that farm operators frequently are multiple jobholders.[1] The occupation and industry listed in the census data, however, is the one occupying the greatest portion of the respondent's time during the period in question. Third, the income data, which will be discussed in the next chapter, are 1959 incomes, which may not correspond to the industry and/or occupation in which they were earned if the respondent changed occupations early in 1960.

Changes in occupational distribution through time

Although there is frequent reference to the rapid changes in the occupational structure in the United States, examination of the changes by the various residence components of the population suggests that much of the change in the total occupational distribution since 1940 has resulted from occupational shifts by the rural population (table VII-1).

Table VII-1.—OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS, BY RESIDENCE AND SEX, FOR THE UNITED STATES: 1960, 1950, AND 1940

[Data for 1960 include Alaska and Hawaii]

Occupation group and sex	United States			Rural farm			Rural nonfarm			Urban		
	1960	1950	1940	1960	1950	1940	1960	1950	1940	1960	1950	1940
MALE												
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	10.3	7.4	5.5	1.7	1.2	0.8	7.8	6.1	6.1	12.0	9.3	7.4
Farmers and farm managers	5.5	10.3	14.7	53.0	56.3	56.1	3.5	3.1	2.0	0.4	0.4	0.4
Managers, officials, and proprietors, except farm	10.7	10.7	9.8	2.7	2.0	1.6	9.7	10.7	12.4	11.9	13.0	12.5
Clerical and kindred workers and sales workers	13.8	12.8	12.6	3.2	2.1	1.5	9.7	9.4	10.0	16.3	16.6	18.7
Craftsmen, foremen, and kindred workers	19.5	18.6	14.5	7.0	5.5	3.3	22.3	21.6	17.3	20.2	21.2	18.6
Operatives and kindred workers	19.8	20.1	18.2	10.1	7.9	4.9	24.5	25.0	24.6	19.7	21.8	22.1
Private household workers	0.1	0.2	0.4	0.1	0.1	0.1	0.2	0.2	0.6	0.1	0.2	0.5
Service workers, except private household	6.0	5.9	6.5	1.2	0.7	0.6	4.4	4.3	6.7	7.0	7.6	9.0
Farm laborers and farm foremen	2.8	4.8	8.2	15.1	19.1	26.7	5.1	6.5	5.7	0.6	0.6	0.7
Laborers, except farm and mine	6.9	8.1	8.7	3.9	4.0	3.8	9.2	11.7	13.7	6.6	8.2	9.3
Occupation not reported	4.6	1.1	0.7	2.0	1.1	0.5	3.7	1.4	0.9	5.1	1.1	0.8
FEMALE												
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	13.0	12.3	13.4	12.0	10.0	12.8	12.4	13.3	16.1	13.2	12.4	12.6
Farmers and farm managers	0.6	0.7	1.4	9.5	8.5	13.5	0.4	0.4	0.2	0.1	0.1	-
Managers, officials, and proprietors, except farm	3.7	4.3	3.5	2.1	2.0	1.7	4.2	5.7	5.8	3.7	4.2	3.7
Clerical and kindred workers and sales workers	37.5	35.8	28.5	21.0	14.8	8.6	29.9	28.0	25.7	40.3	39.2	32.5
Craftsmen, foremen, and kindred workers	1.2	1.5	1.1	0.8	0.7	0.3	1.1	1.3	0.7	1.2	1.5	1.1
Operatives and kindred workers	15.4	19.2	18.1	15.1	13.2	8.8	19.4	20.5	18.2	14.5	19.5	19.6
Private household workers	7.9	8.5	17.7	8.7	7.0	20.0	9.7	10.3	22.4	7.4	8.3	16.4
Service workers, except private household	13.4	12.2	11.0	10.2	5.9	4.6	15.7	14.4	12.0	13.1	12.3	12.1
Farm laborers and farm foremen	1.1	2.9	2.9	15.5	32.1	26.9	1.7	2.5	1.2	0.2	0.2	0.1
Laborers, except farm and mine	0.5	0.8	0.9	0.5	0.7	0.8	0.5	1.1	1.2	0.5	0.8	0.8
Occupation not reported	5.7	1.8	1.6	4.6	5.1	2.1	4.7	2.5	1.6	5.9	1.4	1.0

— Represents zero.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 87; 1950 Census of Population, Vol. II, *Characteristics of the Population*, Part 1, United States Summary, chapter B, table 53; 1940 Census of Population, Second Series, *Characteristics of the Population*, United States Summary, table 19.

For males, there has been a decline in the proportion employed as farmers and farm managers and as farm laborers and farm foremen. The proportions working as clerical and sales workers, craftsmen and foremen, and as operatives have risen. The occupational distribution of urban males, however, has been relatively stable, with growth in professional and technical occupations offsetting modest declines in other occupations. The occupational structure of rural-nonfarm males also has been relatively stable, with declines in the proportion of service workers, managers, and nonfarm laborers offset by increases in the number of foremen and craftsmen.

As indicated, the largest changes in the occupational structure since 1940 have occurred among rural-farm males. Surprisingly, the major decline was not in the proportion of farmers and farm managers but of farm laborers and farm foremen. There has been an offsetting rise in the proportion of rural-farm males employed in all nonfarm occupations except nonfarm laborers. These rather marked changes in the occupational distribution of rural-farm males have been a major factor in the aggregate changes for the economy as a whole.

The occupational distribution of the female labor force has experienced two major shifts since 1940 (table VII-1). The proportion of females employed as clerical or sales workers has risen rapidly and the proportion of females employed as workers in private households has declined by one-half. These changes have taken place in each of the residence components of the population. In addition, there has been a decline in the proportion of rural-farm females working as farm laborers and a rise in the proportion working as operatives in manufacturing. This latter trend is the reverse of that found in urban areas, where the proportion of females employed as operatives in manufacturing has declined, especially since 1950.

Thus, it appears that working women have moved out of households and into offices. Rural-farm females have made this move, but they also have moved out of the fields and into factories. Unlike males, there has been no appreciable increase since 1940 in the proportion of females employed as professional, technical, and kindred workers.

Despite some convergence in the occupational patterns of urban and rural residents, great differences still exist between them. Tables VII-2 and VII-3 show the total occupational distribution of employed males and females in 1960, with a breakdown by residence and color.

Generally, the greatest differences in occupational structure for both whites and nonwhites occurred between the urban and the rural-farm populations, with the rural-nonfarm population occupying an intermediate position. The two largest occupational groups among white urban males were professional, technical, and kindred workers, and managers, officials, and proprietors, each accounting for about one-eighth of the employed males. For rural-farm white males, farmers and farm managers accounted for more than one-half of the employment, and farm laborers and farm foremen for an additional one-eighth. For rural-farm nonwhite males, these two types of farm employment accounted for the occupation of three-fourths of the total.

Table VII-2.—OCCUPATIONAL GROUP OF EMPLOYED MALES, BY RESIDENCE AND COLOR, FOR THE COUNTERMINOUS UNITED STATES: 1960

Occupation group	Total	White			Nonwhite		
		Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	10.3	1.9	8.3	12.9	0.6	2.4	4.5
Farmers and farm managers	5.5	54.4	3.3	0.4	38.4	5.8	0.5
Managers, officials, and proprietors, exc. farm	10.7	2.9	10.4	12.9	0.4	1.3	2.7
Clerical and kindred workers	6.9	1.7	4.8	8.5	0.4	1.3	6.3
Sales workers	6.9	1.7	5.5	8.7	0.2	0.7	1.8
Craftsmen, foremen, and kindred workers:							
Construction craftsmen	5.5	3.0	7.8	5.4	1.5	4.1	3.9
Foremen (n.e.c.)	2.5	0.7	2.9	2.9	0.1	0.3	0.6
Mechanics and repairmen	5.1	2.0	6.4	5.3	0.7	2.5	3.7
Metal craftsmen, except mechanics	2.5	0.7	2.5	3.0	0.1	0.4	1.2
Other craftsmen	3.9	1.1	3.8	4.6	0.3	1.0	2.0
Operatives and kindred workers:							
Drivers and deliverymen	5.2	3.2	6.3	4.8	5.0	9.2	7.6
Other operatives:							
Durable goods manufacturing	6.3	3.0	7.2	6.5	1.9	5.4	7.2
Nondurable goods manufacturing	3.7	1.9	4.7	3.6	1.0	3.3	4.1
Nonmanufacturing industry	4.6	2.1	6.4	4.3	1.5	5.5	6.1
Private household workers	0.1	-	0.1	0.1	0.3	0.7	0.8
Service workers, except private household	6.0	1.1	4.1	6.0	1.6	7.0	16.5
Farm laborers and farm foremen	2.8	13.2	3.9	0.5	35.9	20.0	1.3
Laborers, except farm and mine:							
Construction	1.5	1.0	1.9	1.0	1.9	4.9	4.5
Manufacturing	2.3	1.4	3.1	1.6	3.8	10.6	5.4
Other industries	3.1	1.1	3.0	2.6	2.5	9.2	9.5
Occupation not reported	4.6	2.0	3.6	4.6	2.1	4.4	9.9

— Represents zero.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, tables 87 and 88.

For white males, the greater the formal educational or skill requirements usually associated with the occupation and the more the occupation dealt with people rather than things (sales versus operatives), the greater the disparity between urban and rural-farm residents in the frequency of employment in that occupation. For instance, 5 times the proportion of urban white males as rural-farm white males were employed as clerical workers, sales workers, and service workers, whereas the proportions employed as manufacturing and construction laborers did not differ greatly between the two groups.

The general occupational pattern of rural-nonfarm white males more nearly approached that of the urban than of the rural-farm groups. However, rural-nonfarm white males had a higher proportion of their employment as mechanics, construction craftsmen, drivers and deliverymen, operatives, and laborers (other than farm laborers) than did either urban or rural-farm white males.

The occupational pattern of nonwhite males differed from that of white males, although the sharp differences between the residence classifications also persist for this group. About one-sixth of the urban nonwhite males were employed as service workers and one-tenth as laborers. In general, nonwhite male employment was more heavily concentrated in the occupations usually requiring less formal education and fewer skills. Even so, there was a marked difference between urban nonwhite males and rural-farm nonwhite males, three-fourths of the latter being employed as farmers and farm managers or farm laborers and farm foremen. Apart from these two occupational groups, no other occupational group accounted for more than 5 percent of the employment of rural-farm nonwhite males. As with white males, the occupational distribution for rural-nonfarm nonwhite males was somewhere between the urban and rural-farm groups. Except for the fact that farm laborers and farm foremen accounted for one-fifth of the occupations reported by the rural-nonfarm nonwhite males, the occupational distribution of this group was closer to that of urban than rural-farm males.

The occupational distribution of white females did not show the great disparities for different residence groups that were exhibited for males (table VII-3). In fact, the major differences were in the higher proportion of rural-farm women employed as farmers and farm managers and as farm laborers and farm foremen and the lower proportion employed as clerical workers. Among white females, there was little difference between residence classifications as to the proportion employed in professional, technical, and kindred occupations; operatives; service workers; laborers; and several other occupational groups. Apart from the proportion employed in agricultural occupations and as service workers, the employment patterns for rural-farm and rural-nonfarm white females were relatively similar.

Table VII-3.—OCCUPATIONAL GROUP OF EMPLOYED FEMALES, BY RESIDENCE AND COLOR, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation group	Total	White			Nonwhite		
		Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	13.0	12.8	13.0	14.0	5.3	6.7	7.7
Farmers and farm managers	0.6	9.4	0.3	0.1	10.8	1.3	0.1
Managers, officials, and proprietors, exc. farm	3.7	2.3	4.5	4.0	0.5	1.1	1.2
Clerical and kindred workers	29.7	17.1	24.1	35.7	1.0	2.3	9.8
Sales workers	7.8	6.1	8.6	8.9	0.8	1.1	1.9
Craftsmen, foremen, and kindred workers	1.2	0.9	1.2	1.3	0.2	0.3	0.8
Operatives and kindred workers:							
Durable goods manufacturing	4.0	2.9	4.7	4.4	0.3	0.7	2.3
Nondurable goods manufacturing	8.2	10.9	12.9	7.6	1.9	3.9	5.5
Nonmanufacturing industry	3.1	2.6	3.0	2.7	2.4	4.1	6.1
Private household workers	7.9	5.6	5.7	3.7	35.0	47.6	32.1
Service workers, except private household	13.4	10.5	15.6	11.8	7.7	16.1	22.1
Farm laborers and farm foremen	1.1	13.7	0.9	0.1	30.2	9.2	0.5
Laborers, except farm and mine	0.5	0.5	0.7	0.4	0.7	1.1	0.9
Occupation not reported	5.7	4.7	4.7	5.5	3.3	4.4	8.9

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, tables 87 and 88.

The occupational grouping for nonwhite females did not follow the pattern for white females. Instead, there were sharp differences in employment patterns between nonwhite and white females and between residence categories for nonwhite females. The proportion of nonwhite females employed as professional, technical, and kindred workers; clerical workers; operatives in manufacturing; managers and officials; and sales workers was much lower than for white females, and the proportion declined markedly from the urban to the rural sector. More than 40 percent of the rural-farm nonwhite women were working as farmers and farm managers or as farm laborers and farm foremen, and another 35 percent worked in private households. Almost half of the rural-nonfarm nonwhite women were employed in private households and one-sixth as service workers. Thus, the combination of private household, service, or agricultural employment accounted for 74 percent of all rural-nonfarm and 84 percent of all rural-farm nonwhite females.

There was a marked tendency for rural-farm males to be working in occupations that generally required less formal education and fewer skills. This tendency was more evident for nonwhites than whites. Rural-nonfarm males occupied an intermediate place in the occupational structure. There was no strong differentiation among the residence groups in the occupational pattern of white females.

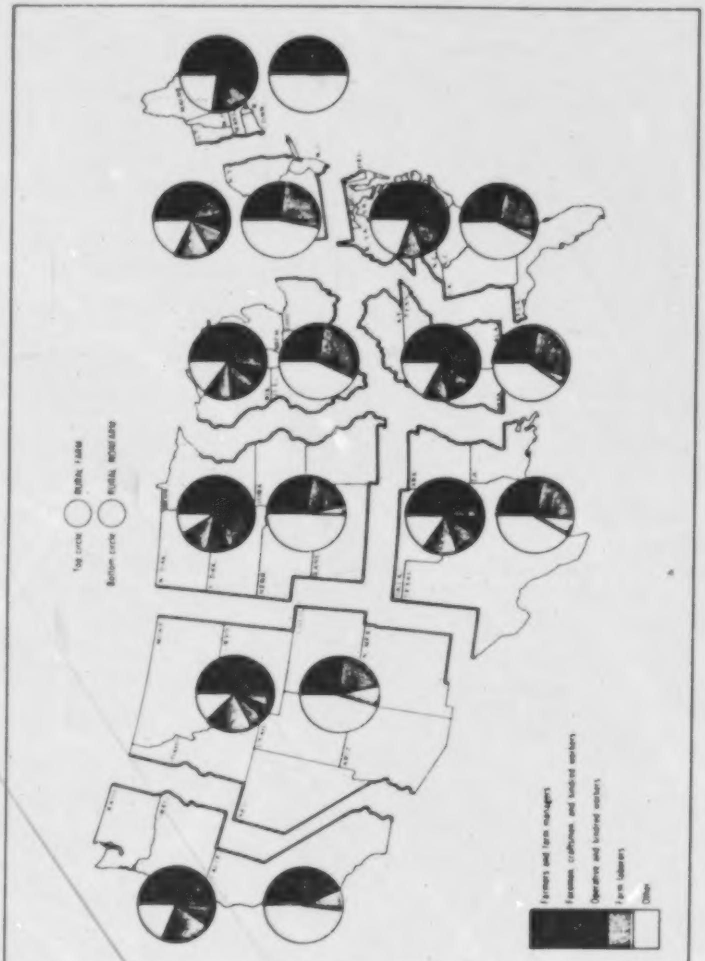
The occupational grouping suggests that the major source of employment for rural-farm males was still in an agricultural occupation. If their primary employment was elsewhere, it was likely to be in occupations which probably were lower paying and required less formal education and/or fewer technical skills. Rural white females, on the other hand, seemed more likely to be employed in occupations which were relatively higher on the pay scale and less likely to be subject to economic uncertainty. Rural nonwhites, however, were frequently employed as farm laborers or as private household or service workers. All three categories were low paying occupations requiring fewer skills and/or less formal education.

Regional differences in occupational distributions

The occupational distribution of rural males differed substantially from one area to another as well as from that of urban males (fig. VII–1). Distributions are shown for rural-farm and rural-nonfarm white males in tables VII–4 and VII–5.

The proportion of rural-farm white males employed as farmers and farm managers—more than 80 percent—was substantially higher in the West North Central Division than in any other area. Surprisingly, employment in these occupations was less frequent in the South than in the Nation as a whole. This highlights the error of using the term "less developed" as synonymous with a high proportion of persons employed in agriculture.

Figure **VII-1.**—Occupational Distribution of Rural-Farm and Rural-Nonfarm White Males, by Divisions, for the Conterminous United States: 1960


Top circle RURAL FARM
Bottom circle RURAL NONFARM
Farmers and farm managers
Foremen, craftsmen, and kindred workers
Operatives and kindred workers
Farm laborers
Other

Source: Tables VI-5 and VI-6

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In the Middle Atlantic and East North Central Divisions, employment of white rural-farm males as operatives in durable manufacturing industries was the second most frequently reported occupation, following agriculture. In the South Atlantic and Pacific Divisions, the most frequent occupations other than agriculture were those of managers, officials, and proprietors. In general, the employment of rural-farm white males who were not engaged in agriculture was distributed among the remaining occupational groupings, with some concentration in occupations classed as operatives. Relatively few of the males in this group in any area were employed as laborers in manufacturing, construction, or other nonfarm work.

Table VII-4.—OCCUPATIONAL DISTRIBUTION OF EMPLOYED RURAL-FARM WHITE MALES, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation group	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, & kindred wkrs.	3.5	2.6	2.0	0.9	2.4	2.1	1.9	1.7	2.6
Farmers and farm managers	41.5	46.7	52.4	69.6	45.7	49.9	50.9	55.2	42.7
Managers, officials, propr's, exc. farm.	4.9	3.6	2.6	1.5	4.5	3.3	3.3	2.6	4.3
Clerical and kindred workers	2.1	1.8	1.9	1.0	2.6	2.2	1.8	1.1	1.5
Sales workers	2.0	1.7	1.5	1.0	3.0	2.3	1.7	1.1	1.8
Craftsmen, foremen, & kindred workers:									
Construction craftsmen	2.6	2.7	2.7	1.8	4.3	4.3	3.8	2.1	2.9
Foremen (n.e.c.)	1.1	0.9	0.9	0.3	1.1	0.8	0.6	0.6	1.0
Mechanics and repairmen	2.4	2.4	2.3	1.2	2.5	2.1	2.0	1.6	2.4
Metal craftsmen, except mechanics	1.1	1.2	1.5	0.3	0.6	0.6	0.4	0.3	0.6
Other craftsmen	1.2	1.4	1.2	0.5	1.4	1.1	1.4	0.8	1.2
Operatives and kindred workers:									
Drivers and deliverymen	3.3	3.4	3.0	1.9	3.4	4.1	5.1	2.6	3.7
Other operatives:									
Durable goods manufacturing	3.2	4.1	5.9	1.3	2.8	3.3	1.6	0.8	2.4
Nondurable goods manufacturing	2.8	2.0	1.9	0.9	4.3	2.6	1.1	0.6	1.1
Nonmanufacturing industry	1.7	2.0	1.9	1.3	2.6	2.5	3.1	2.5	2.0
Private household workers	0.2	0.1	-	-	-	-	-	-	0.1
Service workers, exc. private hsld.	1.4	1.5	1.3	1.7	1.4	1.2	1.2	1.0	1.6
Farm laborers and farm foremen	17.2	15.3	11.3	12.2	11.4	11.4	14.3	20.6	21.4
Laborers, except farm and mine:									
Construction	1.1	1.2	1.0	0.7	1.0	1.3	1.2	0.8	0.7
Manufacturing	2.2	1.7	1.6	0.6	1.7	2.0	1.2	0.9	2.4
Other industries	1.9	1.3	1.0	0.8	1.1	1.0	1.2	1.3	1.7
Occupation not reported	2.6	2.3	2.3	1.5	2.2	1.9	2.0	1.8	2.0

— Represents zero.
Source: Retabulated and computed from data in 1960 Census of Population.

The distribution of occupations for rural-nonfarm white males showed somewhat less variation from one geographical area to another. In the East North Central, Middle Atlantic and New England Divisions, there was a heavier concentration of this group in durable manufacturing. Except in the West, there were relatively few farm laborers and farm foremen among these males, but in several divisions an occupation frequently reported was that of farmer or farm manager. This probably arises from classifying one of the residences on a farm with multiple houses as a rural-nonfarm residence, even though the people living there actually are engaged in farming. This could account for the smaller numbers shown for the rural-farm population by the census in 1960 than in the Current Population Survey for the same year.

Table VII-5.—OCCUPATIONAL DISTRIBUTION OF EMPLOYED RURAL-NONFARM WHITE MALES, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation group	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, & kindred wkrs.	11.7	9.8	7.8	8.2	7.0	6.5	6.6	8.9	9.3
Farmers and farm managers	1.1	1.4	2.3	6.8	2.8	5.0	5.8	5.1	2.6
Managers, officials, propr's, exc. farm.	11.5	9.4	9.5	12.9	10.3	9.3	10.7	11.7	10.6
Clerical and kindred workers	5.1	5.3	5.1	4.8	5.0	4.6	4.2	3.8	3.7
Sales workers	6.2	5.5	5.3	5.9	6.2	5.6	4.6	3.8	4.6
Craftsmen, foremen, & kindred workers:									
Construction craftsmen	7.5	7.4	7.0	7.3	8.9	8.7	8.5	7.6	7.4
Foremen (n.e.c.)	3.3	3.2	3.1	1.9	3.2	2.7	2.4	2.8	2.4
Mechanics and repairmen	6.0	6.7	6.6	6.3	6.6	6.1	6.0	5.9	5.9
Metal craftsmen, except mechanics	3.9	3.3	4.1	1.4	1.7	2.0	1.3	1.0	1.9
Other craftsmen	3.7	4.3	3.8	3.3	3.9	3.4	4.3	3.6	3.9
Operatives and kindred workers:									
Drivers and deliverymen	5.2	6.0	6.2	7.1	6.0	7.4	7.4	5.8	5.9
Other operatives:									
Durable goods manufacturing	7.5	8.9	12.5	3.6	5.1	6.6	3.7	2.7	6.1
Nondurable goods manufacturing	6.2	4.1	3.7	2.7	8.8	5.4	3.3	1.2	1.9
Nonmanufacturing industry	3.0	5.6	5.1	6.0	7.2	8.5	9.4	10.3	5.1
Private household workers	0.3	0.2	0.1	3.1	0.1	-	0.1	0.1	0.1
Service workers, exc. private hsld.	4.3	4.5	4.3	4.5	3.5	3.2	3.8	5.2	4.8
Farm laborers and farm foremen	2.3	2.1	2.4	4.2	3.0	3.9	6.6	8.9	8.9
Laborers, except farm and mine:									
Construction	1.7	2.0	1.6	2.1	1.6	2.2	2.3	2.3	1.6
Manufacturing	2.4	3.9	3.2	1.7	2.7	3.6	2.6	2.1	5.2
Other industries	2.8	2.6	2.8	3.6	2.7	2.5	3.3	4.3	3.8
Occupation not reported	4.4	3.9	3.7	2.8	3.7	3.0	3.3	2.9	4.2

Source: Retabulated and computed from data in 1960 Census of Population.

The importance of farming as an occupation

The distribution of occupations for different geographic areas shows that farm operators make up only a small proportion of the total labor force. But, do these aggregate statistics hide the fact that in certain areas farmers and farm managers are important, or even dominant in the labor force?

The data in table VII-6 show the importance of farm operators in the total labor force of counties in different geographic regions. The counties are tabulated according to the percentage of farm operators in the total labor force in the county.

In the Northeast, there were no counties in which farm operators exceeded 30 percent of the labor force, and farm operators made up more than 10 percent of the labor force in only 16 percent of the counties. In other words, taking the work force as a criterion, there were no counties predominantly agricultural in the Northeast.

There was considerable difference between the two divisions of the North Central Region. In the East North Central Division the pattern was similar to that in the Northeast with farm operators making up less than 20 percent of the labor force in three-fourths of the counties. In contrast, in the West North Central Division, farm operators made up one-third or more of the labor force in 61 percent of the counties indicating that there were many counties in which agriculture was the largest single—if not the dominant—occupation.

Table VII-6.—PREVALENCE OF FARM OPERATORS IN THE LABOR FORCE, BY REGIONS AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Counties		Farm operators as percent of labor force in county																			
			0-10		11-20		21-30		31-40		41-50		51-60		61-70		71-80		81-90		91-100	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
United States	3,073	100.0	1,090	35.5	823	26.8	527	17.1	317	10.3	213	6.9	93	3.0	7	0.2	2	0.1	-	-	-	-
Regions:																						
Northeast	217	100.0	181	83.4	34	15.7	2	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Central	1,055	100.0	217	20.6	229	21.7	197	18.7	168	15.9	155	14.7	80	7.6	6	0.6	2	0.2	1	0.0	-	-
South	1,387	100.0	507	36.6	447	32.2	268	19.3	113	8.1	43	3.1	8	0.6	1	0.1	-	-	-	-	-	-
West	414	100.0	185	44.7	113	27.3	60	14.5	36	8.7	15	3.6	5	1.2	-	-	-	-	-	-	-	-
Divisions:																						
New England	67	100.0	58	86.6	7	10.4	2	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle Atlantic	150	100.0	123	82.0	27	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
East North Central	436	100.0	170	39.0	150	34.4	83	19.0	30	6.9	3	0.7	-	-	-	-	-	-	-	-	-	-
West North Central	619	100.0	47	7.6	79	12.8	114	18.4	138	22.3	152	24.6	80	12.9	6	1.0	2	0.3	1	0.1	-	-
South Atlantic	553	100.0	273	49.4	180	32.5	73	13.2	22	4.0	5	0.9	-	-	-	-	-	-	-	-	-	-
East South Central	364	100.0	75	20.6	111	30.5	98	26.9	47	12.9	26	7.1	6	1.6	1	0.3	-	-	-	-	-	-
West South Central	470	100.0	159	33.8	156	33.2	97	20.6	44	9.4	12	2.6	2	0.4	-	-	-	-	-	-	-	-
Mountain	281	100.0	96	34.2	79	28.1	54	19.2	33	11.7	14	5.0	5	1.8	-	-	-	-	-	-	-	-
Pacific	133	100.0	89	66.9	34	25.6	6	4.5	3	2.3	1	0.7	-	-	-	-	-	-	-	-	-	-

— Represents zero.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VII-7.—RELATIONSHIP BETWEEN RESIDENCE, COLOR, PROXIMITY TO STANDARD METROPOLITAN STATISTICAL AREAS, AND OCCUPATIONAL DISTRIBUTION OF EMPLOYED MALES, FOR THE CONTERMINOUS UNITED STATES: 1960

[A plus sign (+) means a significant positive relationship between the proportion of the labor force employed in the occupation and proximity to an urban area. A minus sign (−) means the relationship between proportion employed in the occupation and proximity was significantly negative. A zero (0) means no significant relationship between proximity and proportion employed in the occupation. Significance was determined by testing parameters of regressions between occupation and distance or size-distance variable, using the "t" test at the .05 level]

Occupation group	White						Nonwhite					
	Distance			Size-distance			Distance			Size-distance		
	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban
Occupations related to proximity	17	13	11	5	9	5	14	15	14	2	13	13
Professional, technical, and kindred workers	+	0	0	0	-	0	+	+	0	0	+	0
Farmers and farm managers	-	-	-	0	0	-	-	-	-	-	-	-
Managers, officials, and proprietors, exc. farm	+	-	-	0	0	-	+	-	-	0	+	0
Clerical and kindred workers	+	+	0	0	-	0	+	+	+	+	+	+
Sales workers	+	+	0	0	-	0	+	+	0	0	0	+
Craftsmen, foremen, and kindred workers:												
Construction craftsmen	+	+	-	0	0	0	0	0	-	0	0	-
Foremen (n.e.c.)	+	0	0	0	-	0	+	+	+	0	+	+
Mechanics and repairmen	+	+	-	0	0	0	+	+	-	0	+	+
Metal craftsmen, except mechanics	+	+	+	+	+	+	+	+	+	0	+	+
Other craftsmen	+	0	0	0	-	0	+	0	0	0	+	0
Operatives and kindred workers:												
Drivers and deliverymen	+	0	-	+	+	+	0	-	-	0	-	-
Other operatives:												
Durable goods manufacturing	+	+	+	0	+	0	+	+	+	0	0	+
Nondurable goods manufacturing	+	+	+	+	+	+	0	0	0	0	0	0
Nonmanufacturing industry	0	-	-	0	0	0	0	-	-	0	0	-
Private household workers	0	0	0	+	+	0	+	+	0	0	+	0
Service workers, except private household	+	-	0	0	0	0	+	0	0	0	+	0
Farm laborers and farm foremen	-	-	0	0	0	0	0	-	-	0	-	-
Laborers, except farm and mine:												
Construction	+	0	-	0	0	0	+	-	-	0	0	-
Manufacturing	+	0	0	+	0	0	0	0	+	0	-	0
Other industries	0	-	-	0	0	0	+	-	-	0	0	-
Occupation not reported	+	+	+	-	0	0	+	+	+	0	+	+

Source: Retabulated and computed from data in 1960 Census of Population.

Despite the belief that many areas of the South are predominantly agricultural, there are relatively few counties in that region where farm operators made up more than 30 percent of the labor force. Most of the counties where this situation existed were found in the East South Central Division, which evidenced more rurality in this regard than did the West South Central Division. For the South as a whole, farm operators constituted less than 20 percent of the labor force in two-thirds of the counties.

There was a marked contrast between the Mountain and Pacific Divisions within the Western Region. In two-thirds of the counties in the Pacific Division, farm operators were less than 10 percent of the labor force, and farmers exceeded one-third of the labor force in only 3 percent of the counties. In the Mountain Division, farm operators represented a third or more of the county labor force in about 19 percent of the counties.

In only about 20 percent of the counties of the conterminous United States did farm operators represent as much as 30 percent of the county labor force. The majority of these counties were located in the West North Central, East South Central, and West South Central Divisions. Elsewhere, farm operators were a distinct minority in the labor force in almost every county. Thus, not only has farming as an occupation declined in total, but it also has declined in every area to the extent that there are few counties where farming is a dominant source of employment.

Location, city size, and occupational distribution. The discussion thus far has centered upon occupational distribution by residence classification, sex, and color. While these classifications show significant differences in occupational patterns, they also mask others. It was assumed that some of these differences were associated with the proximity of the county of residence to urban areas. This was tested by sorting the occupational distribution for each residence group, sex, and color by the distance of the county of residence from a standard metropolitan statistical area county and by the size-distance variable. (For explanation of measurement procedure, see chapter I, page 17.) A summary of these sorts is shown in tables VII–7 and VII–8. The basic data underlying these summary tables are included in appendix tables A–17 through A–20.

In the summary tables, a plus sign (+) means that there is a significant positive relationship between closeness to an SMSA or size-distance variable and the frequency of employment in the occupation in question (as measured by its percentage of total employment).[2] Thus, the closer the county to an SMSA, the greater the frequency of a given occupation in the total occupational structure of that county. A minus sign (−) means that the relationship between proximity and the frequency of an occupation in the total distribution is negative. A zero (0) means there is no statistically significant relationship beween an occupation and the distance variable or the size-distance variable. In other words,

Table VII-8.—RELATIONSHIP BETWEEN RESIDENCE, COLOR, PROXIMITY TO STANDARD METROPOLITAN STATISTICAL AREAS, AND OCCUPATIONAL DISTRIBUTION OF EMPLOYED FEMALES, FOR THE CONTERMINOUS UNITED STATES: 1960

[A plus sign (+) means a significant positive relationship beteen the proportion of the labor force employed in the occupation and proximity to an urban area. A minus sign (−) means the relationship between proportion employed in the occupation and proximity was significantly negative. A zero (0) means no significant relationship between proximity and proportion employed in the occupation. Significance was determined by testing parameters of regressions between occupation and distance or size-distance variable, using the "t" test at the .05 level]

Occupation group	White						Nonwhite					
	Distance			Size-distance			Distance			Size-distance		
	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban	Rural farm	Rural non-farm	Urban
Occupations related to proximity	6	9	8	6	9	11	3	7	4	3	6	12
Professional, technical, and kindred workers	0	−	−	0	0	−	0	−	0	0	0	+
Farmers and farm managers	−	0	0	+	−	−	0	0	0	−	−	0
Managers, officials, and proprietors, exc. farm	0	−	+	0	−	−	0	−	−	0	0	−
Clerical and kindred workers	+	0	0	+	+	0	0	−	0	0	+	+
Sales workers	0	−	0	−	−	+	0	−	−	0	0	+
Craftsmen, foremen, and kindred workers	+	+	+	0	+	+	+	0	0	0	0	+
Operatives and kindred workers:												
Durable goods manufacturing	+	+	+	+	+	+	0	0	0	0	+	+
Nondurable goods manufacturing	0	+	+	0	0	0	0	+	+	+	0	+
Nonmanufacturing industry	0	−	−	−	−	−	0	0	0	0	0	+
Private household workers	0	−	−	+	0	−	+	+	0	0	−	−
Service workers, except private household	0	+	−	0	−	−	0	0	−	0	+	+
Farm laborers and farm foremen	−	0	0	0	−	−	0	0	0	−	−	−
Laborers, except farm and mine	+	0	0	0	0	+	−	−	0	0	0	+
Occupation not reported	0	+	+	0	+	+	−	−	0	0	+	+

Source: Retabulated and computed from data in 1960 Census of Population.

a plus sign indicates that the occupation is relatively more frequent when closer to SMSA's, a minus sign, that it is relatively less frequent, and a zero that it is not related to size or size-distance.

These relationships may arise from two sources. First, the total occupational distribution or frequency of an occupation may be related to distance from an SMSA or to city size. If so, one would expect to find that the relationship would appear for all three residence groups. Second, the nature of some of the occupations may be such that one residence group is better qualified than another because of education, experience, or interest. In this case, one would expect to find that the relationship between distance and/or size-distance would appear for one or more of the residence groups, but not for all of them.

The summary relating to males (table VII-7) indicates that for several occupational groups the frequency of employment for all residence groups was associated with distance from an SMSA and the size-distance variable. Thus, the proportion of farmers and farm managers in the occupational distribution declined as the county of residence was closer to an SMSA, and was negatively related to the size-distance variable. This relationship held for almost all of the residence classifications. The same was generally true for the frequency of employment as farm laborers and farm foremen. Conversely, the proportion of males employed as metal craftsmen and operatives in durable manufacturing generally rose as one approached an SMSA, and it was positively related to the size-distance variable. More of the occupational distributions appeared to be related to the distance from an SMSA than to the variable taking both city size and distance into account.

Perhaps the most striking summary on males is the strong relationship between distance from an SMSA and occupational distribution for rural-farm white males, for whom the frequency of employment in most of the occupational categories appeared to be related to the distance from an SMSA. In 17 of the 20 occupational classifications, there was some relationship between distance from an SMSA and frequency of employment in the occupation. This was in sharp contrast to rural-farm nonwhite males whose frequency of employment in the occupation was related to distance for only four occupations. In general, occupational distribution for white males, regardless of residence classification, was more often related to distance than was the case for nonwhite males. Also, for white males, the relationship between distance and occupation was about as frequent as was the case when city size was taken into account as well as distance. For urban and rural-nonfarm nonwhite males, there generally were fewer relationships between distance and occupational distribution than between size-distance and occupation. There was little relationship between any nonfarm occupation and either distance or size-distance for rural-farm nonwhite males.

In general, the frequency of employment of white females—regardless of residence—as operatives in durable manufacturing was positively related to prox-

Table VII-9.—PERCENT OF EMPLOYED MALES, BY INDUSTRY GROUP AND RESIDENCE, FOR THE UNITED STATES: 1960, 1950, AND 1940

[Data for 1960 include Alaska and Hawaii]

Industry	Total			Rural farm			Rural nonfarm			Urban		
	1960	1950	1940	1960	1950	1940	1960	1950	1940	1960	1950	1940
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, and fisheries	9.0	15.9	23.5	69.5	76.3	83.4	10.1	11.0	9.4	1.5	1.5	1.5
Mining and construction	9.9	10.5	8.6	5.5	5.0	3.5	14.9	18.0	16.9	8.9	9.7	8.2
Manufacturing	30.2	27.0	24.2	10.7	8.5	5.6	30.9	26.6	25.8	32.3	32.0	32.0
Transportation and communications	8.5	9.2	8.1	2.6	2.2	1.5	7.8	8.8	8.5	9.4	11.1	11.0
Wholesale trade, food and dairy products stores, eating and drinking places, other retail trade	17.0	17.1	16.2	5.1	3.3	2.5	15.8	16.1	17.1	18.8	21.0	22.0
Finance, insurance, and real estate	3.4	2.8	3.0	0.5	0.3	0.2	1.9	1.6	2.0	4.1	3.8	4.5
Business and repair services	2.9	3.0	2.3	0.8	0.8	0.5	2.9	3.9	3.1	3.2	3.4	2.9
Private household and personal services	2.5	2.9	3.3	0.5	0.4	0.5	2.1	2.6	3.3	2.9	3.6	4.6
Entertainment and recreation services	0.8	1.0	0.9	0.1	0.1	0.1	0.6	0.8	0.9	0.9	1.3	1.3
Educational services, welfare, religious, and nonprofit membership organizations, and other professional and related services	6.9	4.8	4.3	1.6	1.0	1.0	6.2	5.0	5.6	7.8	5.7	5.4
Public administration	5.3	4.5	4.2	1.5	1.0	0.6	4.1	3.9	5.5	6.0	5.7	5.3
Industry not reported	3.6	1.3	1.3	1.6	1.1	0.6	2.7	1.7	1.9	4.2	1.2	1.5

Source: Retabulated and computed from data in 1960 Census of Population.

imity to an SMSA (table VII-8). The frequency of nonfarm white female employment as service workers was negatively related to distance from an SMSA. Unlike the situation for white males, the frequency of employment in different occupations for rural-farm females was less often related to the distance and size-distance variables than for nonfarm residents. In fact, for both white and nonwhite rural-farm females, there was less relationship between occupational distribution and the proximity to urban areas than for any other residence group.

The employment of rural-farm males in agriculture was strongly related to the distance of the county of residence from an SMSA but less strongly related to the variable measuring both size and distance. As the county of residence was closer to an SMSA, agricultural employment declined, and nonfarm employment rose. This, together with the fact that rural-farm white males employed outside of agriculture tended to be employed in occupations related to both city size and distance, meant that the entire occupational structure for rural-farm males was closely related to proximity to urban areas. Even though a higher proportion of rural-farm nonwhite males was employed in agriculture, the total occupational pattern did not appear to be as closely related to proximity to urban areas as in the case of whites.

The occupational distribution of female employment appears generally less related to proximity to urban areas than is the case for males. Moreover, despite their more frequent employment in agriculture, the occupational pattern of employed rural-farm females is less related to the proximity to urban areas than is that of their urban and rural-nonfarm counterparts.

It was not surprising to find that the proportion of persons employed in agriculture was directly related to distance from urban areas and inversely to the size of the area. What was surprising, however, was to find that the entire occupational structure of rural-farm white males was related to the location of the communities in which they lived. It is not at all apparent why this should be the case for rural-farm white males but not for rural-farm nonwhite males or for females. Much more attention needs to be given to the relationship between location and occupational structure.

Industry of employment

The changes in the industry of employment that have occurred over the past two decades have been largely in response to the greater economic rewards in nonfarm industries than were available in agriculture. Thus, there has been both an absolute and relative decline in the number of persons employed in agriculture. Employment of males in agriculture, forestry, and fisheries declined from 23.5 percent of the employed workers in 1940 to 9.0 percent in 1960 (table VII-9).

Most of this change has been the result of the great decline, both absolute and relative, in the number of rural-farm males employed in agriculture. The proportion of urban males employed in agriculture has remained stable over the last two decades at 1.5 percent, and the proportion of rural-nonfarm males employed in agriculture, forestry, and fisheries was slightly higher than in 1940. During this same period, the proportion of rural-farm males employed in agriculture dropped from 83.4 to 69.5 percent of the total. Since the number of rural-farm males also declined sharply over this period, the actual decrease in agricultural employment was very large.

The contrasting changes in industry of employment among residence groups is of some interest. Although the proportion of males employed in manufacturing has grown over the past two decades, the proportion of urban males so employed has remained unchanged. However, the proportion of rural-nonfarm males employed in manufacturing has risen by about one-fifth since 1940; the proportion of rural-farm males so employed has almost doubled.

Similar changes can be noted in the wholesale and retail trades. Although the proportion of urban and rural-nonfarm males employed in these trades has declined slightly over the past two decades, the proportion of rural-farm males has more than doubled.

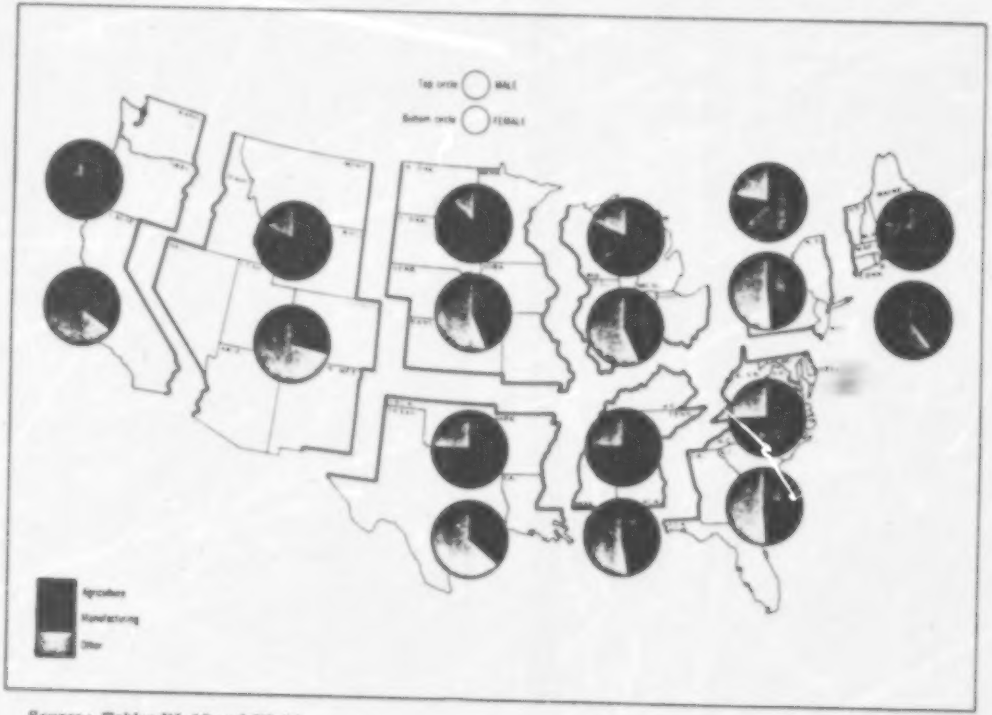
In 1960, two industry groups—agriculture, forestry, and fisheries and manufacturing—employed 80.2 percent of all rural-farm males, but only 41.0 percent of rural-nonfarm males and 33.8 percent of urban males (fig. VII–2).

The changes in industry of employment for females have been most striking for rural-farm females (table VII–10). While there has been a sharp decline in the proportion of rural-farm females employed in agriculture since 1940, the percentage of urban and rural-nonfarm females employed in agriculture—although small—has risen. The proportion of all females working in manufacturing remained relatively stable over the 20-year span at about one-fifth, as a decline in the proportion of urban females was offset by a rise reported for rural-farm and rural-nonfarm females.

In the two decades, 1940–60, there was a decline of one-half in the proportion of females employed in personal services. This decline occurred in every residence group at about the same rate, the proportions by 1960 being similar for all three residence groups. There was an increase in the percentage of females employed in education, hospitals, and other professional and related services in each residence group from 1940 to 1960. By 1960 these services employed about one-fifth of all employed females in each residence group.

In general, over the period from 1940 to 1960 the pattern of industry of employment of rural-farm females became more like that of urban and rural-nonfarm females. The largest remaining differences in 1960 were the much higher proportion of rural-farm females employed in agriculture and the substantially lower proportion employed in manufacturing and in the wholesale and retail

Figure VII–2.—EMPLOYMENT OF RURAL-FARM WHITE MALES AND FEMALES IN AGRICULTURE, MANUFACTURING, AND ALL OTHER INDUSTRIES, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960


Top circle MALE
Bottom circle FEMALE
Agriculture
Manufacturing
Other

Source: Tables VI–12 and VI–13

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Table VII-10.—PERCENT OF EMPLOYED FEMALES BY INDUSTRY GROUP AND RESIDENCE, FOR THE UNITED STATES: 1960, 1950, AND 1940

[Data for 1960 include Alaska and Hawaii]

Industry	Total			Rural farm			Rural nonfarm			Urban		
	1960	1950	1940	1960	1950	1940	1960	1950	1940	1960	1950	1940
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, and fisheries	2.0	3.8	4.4	26.1	41.3	40.8	2.6	3.3	1.7	0.4	0.4	0.3
Mining and construction	0.9	0.8	0.4	0.5	0.4	0.2	0.8	0.8	0.5	0.9	0.8	0.4
Manufacturing	20.8	23.1	20.8	16.9	14.5	9.4	23.2	22.4	19.3	20.5	24.1	22.7
Transportation and communications	3.6	4.3	3.1	1.9	1.5	0.8	2.8	3.5	2.9	3.9	4.7	3.4
Wholesale trade, food and dairy products stores, eating and drinking places, other retail trade	20.7	22.4	18.2	13.5	10.0	6.2	21.2	23.3	17.3	21.1	23.4	20.0
Finance, insurance, and real estate	5.8	4.9	4.1	2.7	1.6	0.8	3.6	2.7	2.2	6.5	5.7	4.9
Business and repair services	1.6	1.2	0.7	0.5	0.3	0.2	0.8	0.7	0.4	1.8	1.3	0.8
Private household and personal services	13.1	15.0	25.8	11.7	9.9	22.9	14.9	16.6	30.0	12.8	15.1	25.3
Entertainment and recreation services	0.7	0.9	0.7	0.2	0.3	0.1	0.6	0.7	0.6	0.8	1.0	0.8
Educational services, welfare, religious, and nonprofit membership organizations, and other professional and related services	21.5	17.3	16.6	18.7	12.7	14.6	21.3	19.1	19.8	21.7	17.4	16.1
Public administration	4.3	4.1	3.0	3.4	2.3	1.6	4.3	4.0	3.3	4.4	4.3	3.2
Industry not reported	4.8	2.2	2.1	3.9	5.2	2.5	3.8	2.9	2.2	5.1	1.8	2.1

Source: Retabulated and computed from data in 1960 Census of Population.

trades. As in the case of occupational distribution, employment patterns by industry showed fewer differences between rural and urban females than were found between their male counterparts.

There were geographical differences in the industry of employment of rural-farm males (table VII-11). It was somewhat surprising to note that the percentage of rural-farm white males employed in agriculture, forestry, and fisheries was lowest in the South Atlantic Division. Indeed, throughout the South, the proportion of white males employed in agriculture was similar to that found in the Northeast, generally considered to be the area where agriculture is of least importance. It was in the West North Central and Mountain Divisions that agriculture was the chief source of employment for three-fourths or more of the white farm males.

Table **VII-11.**—Percent of Employed Rural-Farm White Males by Industry Group, by Divisions, for the Conterminous United States: 1960

Industry group	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, and fisheries	60.8	62.7	64.1	82.3	58.3	62.3	68.6	77.3	66.6
Mining and construction	4.9	5.9	5.0	3.3	7.3	8.0	8.0	4.9	4.9
Manufacturing:									
Machinery, electrical machinery, equipment and supplies	2.4	2.8	4.0	0.9	0.9	1.1	0.6	0.2	0.5
Motor vehicles and equipment	1.2	1.2	2.9	0.4	0.6	0.7	0.6	0.2	0.7
Furniture, & lumber & wood products, primary metal industries, and other durable goods	6.2	5.8	5.2	1.2	5.2	5.8	3.1	2.2	6.4
Food and kindred products	1.4	1.9	2.0	1.2	1.4	1.5	1.1	1.3	2.1
Textile mill products	1.3	0.5	0.1	-	4.1	0.8	0.1	-	0.1
Apparel and other fabricated textile products	0.1	0.2	0.1	0.1	0.5	0.7	0.1	-	-
Printing, publishing, and allied products, chemical & allied products, and other nondurable goods	3.1	2.4	2.2	0.7	2.4	2.2	1.4	0.5	1.2
Railroad and railway express services, trucking services & warehousing, other transportation & communication, utilities & sanitary services	2.8	3.2	2.7	1.9	2.9	3.2	2.8	2.8	3.2
Wholesale trade	1.8	1.7	1.3	1.0	1.4	1.1	1.3	1.2	1.6
Food and dairy products stores	0.9	0.7	0.6	0.4	1.8	1.5	1.2	0.4	0.7
Eating and drinking places	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.3
Other retail trade	3.0	3.1	3.0	2.1	4.5	3.6	3.4	2.4	3.3
Finance, insurance, and real estate	0.9	0.7	0.6	0.3	0.8	0.5	0.7	0.4	0.9
Business and repair services	1.0	0.9	0.3	0.6	1.0	1.1	0.9	0.7	1.0
Private household and other personal services	0.9	0.7	0.3	0.2	0.6	0.5	0.5	0.5	0.7
Entertainment and recreation services	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2
Educational services, welfare, relig., & nonprofit membership organizations	1.4	1.2	1.0	0.5	1.1	1.1	1.1	0.9	1.2
Hospitals	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Other professional and related services	0.9	0.7	0.5	0.2	0.6	0.4	0.4	0.3	0.7
Public administration	2.0	1.4	1.3	1.0	2.6	2.0	2.0	1.7	1.8
Industry not reported	2.1	1.9	1.9	1.3	1.5	1.3	1.7	1.6	1.8

— Represents zero.

Source: Retabulated and computed from data in 1960 Census of Population.

Patterns of employment of rural-farm males in other industries also varied by geographic area. In the East North Central and Middle Atlantic Divisions, durable goods manufacturing was a major source of employment. Textile mills were much more important sources of employment in the South Atlantic than in other divisions. Construction and mining also were of much greater importance in the three southern divisions than elsewhere.

Apart from these few differences the general pattern of industry of employment of rural-farm white males differed little from one geographic area to another. Agriculture was the dominant source of employment. In every area, three industry classifications accounted for employment of 80 percent or more of all rural-farm white males, namely (1) agriculture, forestry, and fisheries; (2) construction and mining; and (3) manufacturing. These were industries in which technical change and automation were having the greatest impact, so that the long time trend in employment in these industries has been downward. As long as this trend continues, the prospects are not bright for rapid increases in the relative income levels of rural-farm families.

As in the case of males, the industry of employment of rural-farm white females varied considerably from one geographic area to another (table VII-12).

Table VII-12.—PERCENT OF EMPLOYED RURAL-FARM WHITE FEMALES BY INDUSTRY GROUP, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Industry group	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, and fisheries	20.6	25.6	24.6	36.0	19.7	12.7	23.7	23.5	27.9
Mining and construction	0.5	0.5	0.5	0.5	0.6	0.4	0.8	0.7	0.7
Manufacturing:									
Machinery, electrical machinery, equipment and supplies	3.3	3.4	4.6	1.1	1.4	1.9	0.7	0.2	0.5
Motor vehicles and equipment	0.6	0.5	1.1	0.2	0.2	0.3	0.2	0.1	0.3
Furniture, & lumber & wood products, primary metal industries, and other durable goods	4.2	3.3	3.9	1.0	1.4	2.5	1.2	0.5	1.2
Food and kindred products	1.9	2.1	2.1	2.0	1.6	1.3	2.1	3.0	4.2
Textile mill products	2.1	1.9	0.4	0.1	10.2	3.2	0.4	0.1	0.2
Apparel and other fabricated textile products	2.0	6.1	1.7	2.6	11.4	21.6	5.1	0.3	0.3
Printing, publishing, and allied products, chemical & allied products, and other nondurable goods	4.9	4.1	3.6	2.8	2.4	3.1	2.1	1.0	1.1
Railroad and railway express services, trucking services & warehousing, other transportation & communication, utilities & sanitary services	2.2	2.1	2.2	1.8	2.0	1.7	2.3	3.5	2.9
Wholesale trade	1.4	0.9	1.3	1.3	1.1	0.9	1.2	1.9	3.1
Food and dairy products stores	1.3	2.2	2.4	2.1	2.9	3.4	3.8	2.0	2.2
Eating and drinking places	2.5	3.3	4.4	4.4	2.1	3.0	4.5	5.6	3.8
Other retail trade	5.0	5.4	6.4	5.7	8.7	7.4	8.9	7.5	7.1
Finance, insurance, and real estate	3.9	3.0	3.4	3.0	2.8	2.3	3.1	3.0	3.6
Business and repair services	0.7	0.5	0.5	0.5	0.3	0.3	0.5	0.7	0.9
Private household and other personal services	13.4	9.2	8.9	8.4	6.3	7.0	9.7	10.5	10.7
Entertainment and recreation services	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.6	0.5
Educational services, welfare, relig., & nonprofit membership organizations	12.9	11.6	12.2	12.7	12.0	14.1	13.6	15.9	12.6
Hospitals	4.6	3.8	4.8	4.4	2.6	2.8	3.7	4.0	3.7
Other professional and related services	4.4	3.8	3.7	3.2	2.5	1.9	3.0	3.5	4.6
Public administration	4.0	3.0	3.2	3.3	4.0	3.8	4.8	6.3	4.7
Industry not reported	3.4	3.5	3.8	4.6	3.4	4.0	4.3	5.6	3.2

Source: Retabulated and computed from data in 1960 Census of Population.

The proportion of white females employed in agriculture, forestry, and fisheries was generally lower in the South than elsewhere, but it was very high in the West North Central Division. Perhaps the most striking element in the regional patterns was the high percentage of women in the South Atlantic and East South Central Divisions employed in textile and/or apparel manufacturing. In this area, these two industries accounted for more than one-fifth of the employment of rural-farm white females. The differences in other categories, of course, offset the large differences in the two industry groups mentioned.

Summary

There are substantial differences in the occupational distribution and industry of employment between the rural and urban populations. The greatest differences were for males.

Rural-farm males still were predominantly employed in agriculture as farmers or farm laborers. If they were employed outside of agriculture, it was usually in manufacturing or construction. In the nonfarm industries, they tended to be concentrated in the lower paying occupations requiring less skill and/or education. The occupational distribution of these males appeared to be strongly related to the distance of the county of residence from an SMSA, less so for nonwhites than for whites. Tabulations were not available relating industry of employment to proximity to urban areas.

Although agriculture was still the single industry employing the largest portion of rural-farm females, the industrial and occupational pattern of females differed less among the residence components than in the case of males. Moreover, the relationship between proximity to urban areas and occupational patterns appeared to be much less strong for females than for males.

Despite the sharp shifts that have occurred in the occupational structure and industry of employment of rural people in the last two decades, their employment patterns still differ significantly from those of the urban population. Rural nonfarm residents were moving toward employment patterns of the urban population, although they were much more heavily concentrated in the lower paying occupations and industries. The employment patterns of rural-farm residents remained quite different from those of nonfarm residents, especially for males, while patterns for rural-farm females were converging toward those of their nonfarm counterparts. Rural-farm males, however, have experienced much less change and were less like their nonfarm counterparts. In other words, rural-farm females can change, and have changed, their employment patterns without a change in residence. Males, however, have tended to change their residence classification as well as their employment patterns if they leave agriculture.

NOTES

[1] Dale E. Hathaway and Arley D. Waldo, *Multiple Jobholding by Farm Operators,* Research Bulletin No. 5 (Michigan State University Agricultural Experiment Station, East Lansing, Mich., 1964).

[2] The significance was measured by calculating whether the regression coefficient of the distance or size-distance variable upon the percentage of employment was significantly different from zero (measured by the "t" test at the .05 level over the range of the size or size-distance variable).

CHAPTER VIII

INCOME AND EARNINGS

Introduction

Great interest centers around the comparative income and earnings for different components of the American population. Current income is closely related to economic welfare. Moreover, income tells us something about resource allocation in our economy. Thus, even though there is a separate monograph on income of the American people,[1] attention also will be given to the subject in this chapter which deals largely with income comparisons between the urban and rural populations. The next chapter discusses the results of statistical analyses which attempt to explain the differences in income found between the residence groups.

The income measured by the census of population includes wages, salaries, net income from self-employment, and income from other sources. It does not include income in kind, such as the value of home-produced food or owner-occupied housing, nor does it include gifts, receipts from sale of property, insurance benefits, bank withdrawals, or lump-sum inheritances.

The income measured is money income. This presents some problems in comparing the rural population with the urban inasmuch as the incomes of farm families often contain a larger component of income in kind than do those of urban families. It has been estimated elsewhere that the national median income level of farm families ought to be adjusted upward by about 16 percent in order to account for the value of home-produced food.[2] However, there is no evidence as to the quantity of home-produced food for rural-nonfarm and urban families, so that this adjustment would represent the highest estimate. In addition, some adjustment, which has not been made in the census data, probably ought to be made to compensate for the somewhat higher living costs in urban areas.[3]

The data presented in this chapter consist of the income of families and of persons 14 years old and over. The census also presents income data for unrelated individuals and for families and unrelated individuals combined. However, there were only 361,442 unrelated individuals in the rural-farm population of 13.4 million and 2.5 million unrelated individuals in the rural-nonfarm population of 40.6 million. Thus, it was decided that in discussing the earnings of the rural population, the statistics used would be limited to the income of families.[4]

The earnings statistics relate to the individual responsible for them. They do not include transfer payments or other income, but essentially represent the wage and salary income and/or net income from self-employment.

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The income and earnings statistics relate to the calendar year 1959. But the data are classified by the place of residence of the individual or family at the time of the 1960 census and the occupation shown for the individual is the one reported at that time. To the extent that there was rural-urban movement or occupational change, the data will be biased. Since the movement usually is toward urban areas and to higher income occupations, this migration should tend to reduce modestly the urban income level shown in the census from its actual level in 1959 and to lower slightly the relative income advantage of the higher income occupations.

The data that follow deal chiefly with median income and earnings. While the inclusion of the complete distributions would be useful, limitations of space prohibit it. The median rather than mean is used for two reasons: (1) the median is not affected by the inclusion of a few very high incomes and, (2) means are difficult to compute from the open-end classification system used by the census for higher income levels.[5]

Median family income in 1959

Several observations concerning median family income in 1959 are in order (table VIII–1):

(1) The median income of white families in urban areas was significantly higher than for rural-nonfarm white families in every division and region and for the United States (fig. VIII–1). The median income of urban white families for 1959 for the United States was $6,432, or 29 percent above the $4,976 calculated for white rural-nonfarm families, and 85 percent above the median income of $3,471 for rural-farm white families. Rural-nonfarm median income was

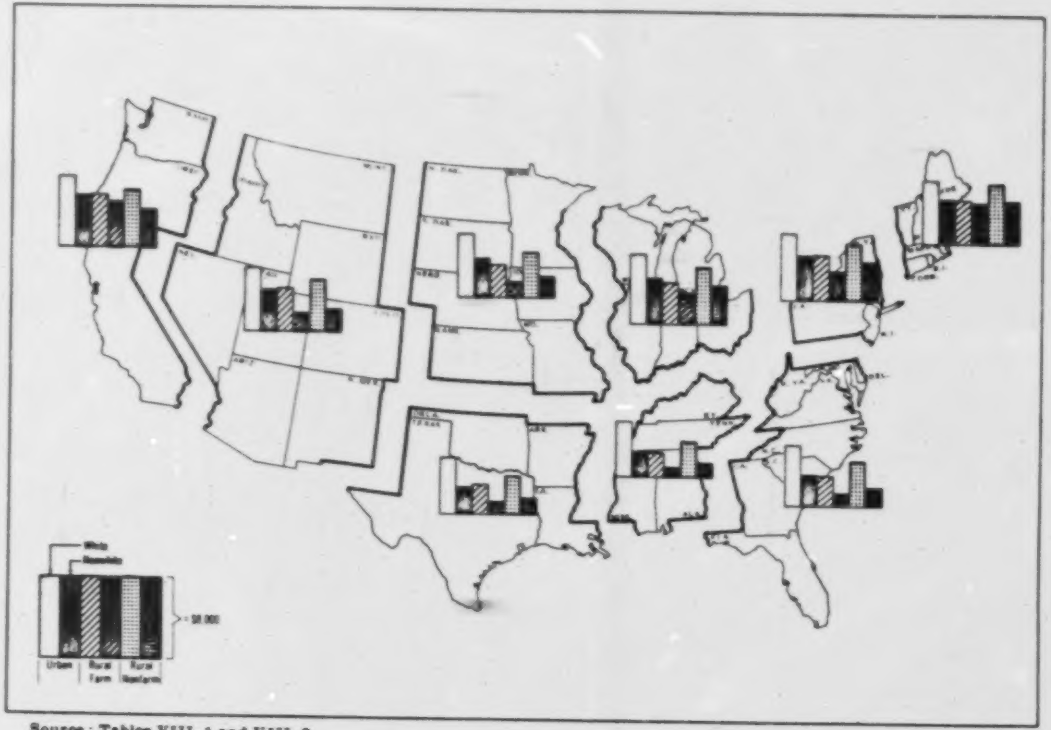
TABLE VIII–1.—MEDIAN INCOME AND INCOME RATIO OF WHITE FAMILIES IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	3,471	4,976	6,432	129.3	185.3	143.4
Regions:						
Northeast	4,398	5,696	6,513	114.3	148.1	129.5
North Central	3,597	5,205	6,623	122.2	184.1	144.7
South	2,848	4,136	5,806	140.4	203.9	145.2
West	4,706	5,465	6,750	123.5	143.4	116.1
Divisions:						
New England	4,287	5,883	6,287	106.9	146.7	137.2
Middle Atlantic	4,425	5,624	6,588	117.1	148.8	127.1
East North Central	4,112	5,573	6,800	122.0	165.4	135.5
West North Central	3,193	4,410	6,128	138.9	191.9	138.1
South Atlantic	3,070	4,500	6,020	133.8	196.1	146.6
East South Central	2,499	3,615	5,596	154.8	223.9	144.7
West South Central	3,019	3,847	5,649	146.8	187.1	127.4
Mountain	4,292	5,054	6,150	121.7	143.3	117.8
Pacific	5,066	5,674	6,919	121.9	136.6	112.0

[1] Coefficient of variation among divisions: Rural farm, 22.49; rural nonfarm, 17.23; urban, 7.45.

Source: Retabulated and computed from data in 1960 Census of Population.

Figure VIII-1.—Median Income of Families in 1959, by Residence, Color, and Divisions for the Conterminous United States: 1960


White
Nonwhite
Urban
Rural Farm
Rural Nonfarm

Source: Tables VIII-1 and VIII-2.

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closest to urban levels in New England. The relationship between urban income and rural-nonfarm is similar in the Middle Atlantic, East North Central, Mountain, and Pacific Divisions, where the median urban family income was about one-fifth above the median level of rural-nonfarm families. In the other geographic divisions, urban levels exceeded rural-nonfarm levels by one-third to one-half.

(2) The gap between median income levels was even wider between the urban and rural-farm groups than between the urban and rural-nonfarm segments. For the conterminous United States the median income for urban white families was 185 percent of the median for rural-farm white families. In the Northeast and West, urban median income levels were one-third to one-half higher than for rural-farm families. In other areas, the median level of urban family income was from two-thirds to more than twice as large as median income for rural-farm families. It is worth noting that if the regions are ranked by the absolute level of median family income in urban areas, the higher the absolute urban level, the less the gap between rural-farm and urban families. In other words, the higher the urban income level the closer the rural incomes in neighboring areas will approach the urban level.

The variation in median family income among geographic divisions was much lower for the urban component of the population than for the rural. It was greatest for the rural-farm segment. Thus, the median family income level was highest in urban areas in all regions and the variation was relatively small; it was lowest in the rural-farm component of every region, where the relative variation was great.

Several striking features are readily apparent in the income data for nonwhite families (table VIII–2). First, the median income of nonwhites was markedly lower than for white families in the same residence component in the same geographic area, the only exceptions being in the rural-farm areas of the New England and Pacific Divisions where the differences were less marked (table VIII–3). With relatively few exceptions, the income of nonwhite families was closest to that of white families in urban areas. Also, the disparity between urban and rural income levels generally was greater for nonwhites than for whites; that is, for nonwhite families, the ratio of median income in urban areas to that in rural-nonfarm and rural-farm was markedly higher than the same ratios for white families. Thus, nonwhite urban families in the conterminous United States had a median income almost twice that of rural-nonfarm nonwhite families and almost three times that of rural-farm nonwhite families. This was because the median figures for the United States were weighted by urban nonwhites in areas outside of the South and by a large rural nonwhite population in the South. Actually, the urban-rural-nonfarm ratio was lower for nonwhite families in the New England, East North Central, and the Pacific Divisions.[6]

In addition to the fact that the median income of nonwhite families was lower than that for white families, the relative variation among geographic divisions was greater for nonwhites than for whites. As in the case of whites, the greatest relative variation among areas was found in the rural-farm residence group. Thus, the median family income of rural-farm nonwhites in the Pacific Division was more than 4 times that of the nonwhites of the same residence group in the East South Central Division.

TABLE VIII-2.—MEDIAN INCOME AND INCOME RATIO OF NONWHITE FAMILIES IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	1,253	1,878	3,663	195.0	292.3	149.9
Regions:						
Northeast	2,865	3,877	4,392	113.3	153.3	135.3
North Central	1,879	2,769	4,392	158.6	233.7	147.4
South	1,199	1,773	2,843	160.3	237.1	147.9
West	3,003	2,977	4,938	165.9	164.4	99.1
Divisions:						
New England	4,083	4,225	4,363	103.3	106.9	103.5
Middle Atlantic	2,823	3,820	4,394	115.0	155.7	135.3
East North Central	3,112	3,820	4,510	118.1	144.9	122.8
West North Central	1,583	2,183	3,776	173.0	238.5	137.9
South Atlantic	1,296	1,982	3,086	155.7	238.1	152.9
East South Central	1,030	1,474	2,505	169.9	243.2	143.1
West South Central	1,285	1,669	2,717	162.8	211.4	129.9
Mountain	1,814	2,232	4,105	183.9	226.3	123.0
Pacific	4,490	3,738	5,043	134.9	112.3	83.3

[1] Coefficient of variation among divisions: Rural farm, 53.90; rural nonfarm, 38.80; urban, 22.90.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VIII-3.—MEDIAN INCOME RATIO OF WHITE TO NONWHITE FAMILIES IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Ratio of white to nonwhite median family income		
	Rural farm	Rural nonfarm	Urban
United States, total	277.0	265.0	175.6
Regions:			
Northeast	153.5	146.9	148.3
North Central	191.4	188.0	150.8
South	237.5	233.2	204.2
West	156.7	183.6	136.7
Divisions:			
New England	105.0	139.2	144.1
Middle Atlantic	156.7	147.2	149.8
East North Central	132.1	145.9	150.8
West North Central	201.7	202.0	162.3
South Atlantic	236.9	227.0	195.1
East South Central	242.6	245.3	223.4
West South Central	234.9	230.5	207.9
Mountain	236.6	226.4	149.8
Pacific	112.8	151.8	137.2

Source: Retabulated and computed from data in 1960 Census of Population.

Several factors may account for the substantial differences in family income found among residence groups, regions, and races. One may be the difference in the number of income earners per family. Another may be the differing occupational distributions. A third factor may be the difference in earnings within occupations. These will be discussed in the sections that follow.

Income of persons

Family income deals with the income of family units, which, in many cases, include more than one individual with income. The data relating to the income of persons pertain to all individuals 14 years old and over who have income, thus generally identifying the income with those responsible for earning it.[7]

The median income of all persons 14 years old or over with income by division, region, and for the conterminous United States is shown in table VIII–4. This table also shows the ratio of median income of persons in urban areas to the median in rural-nonfarm and rural-farm areas and the coefficient of variation in the median income among divisions.

Table **VIII–4.**—MEDIAN INCOME AND INCOME RATIO OF PERSONS 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	1,589	2,217	3,122	140.8	196.5	139.5
Regions:						
Northeast	2,154	2,975	3,296	110.8	153.0	138.1
North Central	1,998	2,509	3,322	132.4	166.3	125.6
South	1,144	1,702	2,480	145.7	216.8	148.8
West	2,349	2,480	3,412	137.6	145.3	105.6
Divisions:						
New England	2,015	2,879	3,047	105.8	151.2	142.9
Middle Atlantic	2,191	3,018	3,373	111.8	153.9	137.7
East North Central	2,140	2,936	3,470	118.2	162.1	137.2
West North Central	1,865	1,973	2,909	147.4	156.0	105.8
South Atlantic	1,128	1,937	2,611	134.8	231.5	171.7
East South Central	998	1,443	2,251	156.0	225.6	144.6
West South Central	1,371	1,456	2,447	168.1	178.5	106.2
Mountain	2,246	2,336	3,082	131.9	137.2	104.0
Pacific	2,448	2,573	3,499	136.0	142.9	105.1

[1] Coefficient of variation among divisions: Rural farm, 28.85; rural nonfarm, 26.88; urban, 15.24.

Source: Retabulated and computed from data in 1960 Census of Population.

Outside of the South, there was relatively little variation within the residence classifications among divisions. Perhaps the most striking feature was that the ratio of urban to rural-farm median income of persons was usually higher than the ratio of family incomes for the same two residence groups. This suggests that even though personal incomes were relatively lower in rural-farm areas, the typical farm family had more income earners than the typical urban family.

This relationship was noticeable in the data for both whites (tables VIII-5 and VIII-6) and nonwhites. The markedly unfavorable ratio of personal income for rural-farm white males to urban white males was evident, especially in the South as a whole and the West North Central Division of the North Central Region. The variation in the personal income of white males among regions was greater for rural-farm males than for other residence groups, with the relative variation about 3 times as high for rural-farm as for urban groups.

Table VIII-5.—MEDIAN INCOME AND INCOME RATIO OF WHITE MALES 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	2,283	3,539	4,792	135.4	209.9	155.0
Regions:						
Northeast	2,766	4,205	4,752	113.0	171.8	152.0
North Central	2,438	3,937	5,056	128.4	207.4	161.5
South	1,812	2,862	4,247	148.4	234.4	157.9
West	3,245	3,864	5,099	132.0	157.1	119.1
Divisions:						
New England	2,592	4,145	4,407	106.3	170.0	159.9
Middle Atlantic	2,813	4,229	4,871	115.2	173.2	150.3
East North Central	2,739	4,310	5,191	120.4	189.5	157.4
West North Central	2,262	3,181	4,612	145.0	203.9	140.6
South Atlantic	1,898	3,084	4,329	140.4	228.1	162.5
East South Central	1,515	2,471	4,156	168.2	274.3	163.1
West South Central	2,069	2,664	4,182	157.0	202.1	128.8
Mountain	3,034	3,621	4,621	127.6	152.3	119.3
Pacific	3,447	4,010	5,221	130.2	151.5	116.3

[1] Coefficient of variation among divisions: Rural farm, 24.3; rural nonfarm, 19.8; urban, 8.7.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VIII-6.—MEDIAN INCOME AND INCOME RATIO OF WHITE FEMALES 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	826	1,016	1,636	161.0	198.1	123.0
Regions:						
Northeast	961	1,280	1,827	142.7	190.1	133.2
North Central	831	964	1,525	158.2	183.5	116.0
South	794	963	1,504	156.2	189.4	121.3
West	822	1,025	1,658	161.8	201.7	124.7
Divisions:						
New England	916	1,283	1,700	132.5	185.6	140.1
Middle Atlantic	974	1,279	1,874	146.5	192.4	131.3
East North Central	880	1,046	1,599	152.9	181.7	118.9
West North Central	776	878	1,393	158.7	179.5	113.1
South Atlantic	871	1,169	1,691	144.7	194.1	134.2
East South Central	759	891	1,454	163.2	191.6	117.4
West South Central	740	830	1,336	161.0	180.5	112.2
Mountain	740	970	1,383	142.6	186.9	131.1
Pacific	874	1,059	1,754	165.6	200.7	121.2

[1] Coefficient of variation among divisions: Rural farm, 10.2; rural nonfarm, 16.2; urban, 12.1.

Source: Retabulated and computed from data in 1960 Census of Population.

The personal income of white females did not follow the pattern of white males. Rural-farm females had less income disparity with their urban counterparts than was the case with males. Moreover, the personal income of these females did not show the great regional differences that marked the income of males. For white females there was little difference in the relative geographic variation among the residence groups.

Table VIII-7.—MEDIAN INCOME AND INCOME RATIO OF NONWHITE MALES 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	773	1,235	2,761	223.6	357.2	159.8
Regions:						
Northeast	1,817	2,307	3,310	143.5	182.2	127.0
North Central	1,042	1,424	3,488	244.9	336.7	136.7
South	744	1,145	2,153	188.0	289.4	153.9
West	1,966	1,819	3,591	197.4	182.7	92.5
Divisions:						
New England	1,734	2,233	3,209	143.7	185.1	128.8
Middle Atlantic	1,823	2,328	3,318	142.5	182.0	127.7
East North Central	1,747	1,725	3,637	210.8	208.2	98.7
West North Central	867	1,190	2,899	243.6	334.4	137.3
South Atlantic	781	1,303	2,289	175.7	293.1	166.8
East South Central	676	932	1,892	203.0	279.9	137.9
West South Central	785	1,023	2,073	202.6	264.1	130.3
Mountain	1,289	1,546	2,950	190.8	228.9	119.9
Pacific	2,575	1,983	3,692	186.2	143.4	77.0

[1] Coefficient of variation among divisions: Rural farm, 47.5; rural nonfarm, 32.6; urban, 23.0.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VIII-8.—MEDIAN INCOME AND INCOME RATIO OF NONWHITE FEMALES 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income (dollars)[1]			Income ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	365	489	1,094	223.7	299.7	134.0
Regions:						
Northeast	680	956	1,735	181.5	255.1	140.6
North Central	449	726	1,357	186.9	302.2	161.7
South	357	468	831	177.6	232.8	131.1
West	695	806	1,566	194.3	225.3	116.0
Divisions:						
New England	1,219	1,048	1,569	149.7	128.7	86.0
Middle Atlantic	627	944	1,749	185.3	278.9	150.6
East North Central	753	762	1,419	186.2	188.4	101.2
West North Central	399	687	1,111	161.7	278.4	172.2
South Atlantic	359	478	906	189.5	252.4	133.1
East South Central	345	415	702	169.2	203.5	120.3
West South Central	383	520	814	156.5	212.5	135.8
Mountain	560	743	1,229	165.4	219.5	132.7
Pacific	914	889	1,624	182.7	177.7	97.3

[1] Coefficient of variation among divisions: Rural farm, 48.4; rural nonfarm, 30.3; urban, 30.6.

Source: Retabulated and computed from data in 1960 Census of Population.

Nonwhites in urban areas had a substantially higher level of personal income than either rural-nonfarm or rural-farm nonwhites (tables VIII-7 and VIII-8). The absolute income level of nonwhite persons was lower than for whites, but the relative income advantage of urban residents over rural was greater for nonwhites. By and large, the ratio of urban to rural incomes of nonwhites was highest in the South, as in the case of whites. The relative variation in income levels between geographic divisions was substantially greater for nonwhites than for whites. For nonwhites, both male and female, the greatest geographic variation in income occurred among rural-farm residents.

Assuming that living costs do not vary significantly from region to region for a given residence classification, the coefficient of variation might be taken as a rough measure of the relative adjustment of the labor force to supply and demand conditions among regions. Indications are that this adjustment was best, in the sense that the region-to-region variations in income were lower, for urban residents and poorest for rural-farm residents. In a given residence group, this adjustment appears to be better, in general, for whites than for nonwhites. The consistently large differentials in personal income of urban people over their rural-farm and rural-nonfarm counterparts suggest that there was a relationship between urban-industrial concentrations and income level in the economy.

The income of white males was consistently higher than that of nonwhite males. The income of the nonwhites was highest relative to whites in urban areas in every division except the Pacific (table VIII-9). There was a remarkable uniformity between geographic areas outside of the South in this regard, with the incomes of the whites averaging from one-third to one-half higher than the earnings of nonwhites. In urban areas of the South, however, the income of urban white males averaged about twice that of the nonwhites.

Surprisingly, the ratio of the income of nonwhite to white males was generally higher for rural-farm than for rural-nonfarm persons. This was especially true in the Northeast, East North Central, and Pacific Divisions. In the other divisions, the ratios were about equal. The disadvantage of nonwhites relative to whites was particularly marked in the rural areas of the South and North Central Regions, and in the Mountain Division of the West.

The income ratio for females was most similar among urban residents, although in the New England and Pacific Divisions, rural-farm nonwhite females had higher median incomes than did rural-farm white females. The ratio of white to nonwhite income for females was not as high as for males in the same area and residence classification, but was substantially higher in the South than elsewhere.

In general, the income of persons was substantially higher in urban than in rural areas and, with few exceptions, was lowest in rural-farm areas. Rural income was highest relative to urban income in those parts of the Nation that had the highest absolute level of income per person. Thus, in the South where urban income was substantially lower than elsewhere, the ratio of income of rural people was lowest when compared with that of urban people. The same position held for the income relationship between whites and nonwhites. The income of nonwhites was most favorable relative to whites in urban areas and, within urban areas, the gap was smallest in the highest income regions. In rural areas, the ratio of nonwhite to white income was generally higher in rural-farm than in rural-nonfarm areas. Thus, the higher the median income level in an area, the smaller was the gap in income among residence classifications and between whites and nonwhites.

Table VIII-9.—INCOME RATIO OF WHITE MALES TO NONWHITE MALES AND OF WHITE FEMALES TO NONWHITE FEMALES 14 YEARS OLD AND OVER IN 1959, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median income ratio					
	White males to nonwhite males			White females to nonwhite females		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
United States, total	295.3	286.6	178.6	226.3	207.8	149.5
Regions:						
Northeast	152.2	182.3	143.6	141.3	133.9	105.3
North Central	234.0	276.5	145.0	185.1	132.8	112.4
South	243.5	250.0	197.3	222.4	205.8	181.0
West	165.1	212.4	142.0	118.3	127.2	105.9
Divisions:						
New England	149.5	185.6	137.3	75.1	122.4	108.3
Middle Atlantic	154.3	181.7	146.8	155.3	135.5	107.1
East North Central	156.8	249.9	142.7	116.9	137.3	112.7
West North Central	260.9	267.3	159.1	194.5	127.8	125.4
South Atlantic	243.0	236.7	189.1	242.6	244.[illegible]	186.6
East South Central	224.1	265.1	219.7	220.0	214.7	207.1
West South Central	263.6	260.4	201.7	193.2	159.6	164.1
Mountain	235.4	234.2	156.6	132.1	130.6	112.5
Pacific	133.9	202.2	141.4	95.6	119.1	108.0

Source: Retabulated and computed from data in 1960 Census of Population.

Earnings by occupation

Although "income" includes receipts from other sources, "earnings" include only wages, salaries, and net income from self-employment. Thus, the data for earnings by occupation represent the closest approximation to the returns for human effort that are available from census data. Of course, for certain professional groups and for farmers, the earnings figure also includes returns to capital owned by the individual. This is especially true in farming where earnings represent a commingling of returns for labor, management, and the ownership of capital.

The differences in family and personal income by residence classification and geographic areas, discussed above, could arise from two sources. First, because of the different occupational structure between urban and rural residents, income differences may be due to the employment of a higher proportion of urban population in higher paying occupations. Second, it is possible that earnings in a given occupation were higher in urban than in rural areas or higher for urban than for rural residents. The data in this section deal primarily with the question of earnings of different residence groups within the various occupations.

The median earnings of males in all occupations were consistently higher in urban than in rural areas (table VIII–10). In every geographical division, the lowest earnings were reported for the rural-farm group. The ratios of earnings in these residence groups were similar to the pattern for income, except that the divergence between rural-farm and urban males was even greater for earnings than for income. Thus, for the conterminous United States the median earnings of males in urban areas were 25 percent above those in rural-nonfarm areas and were 120 percent above the level of rural-farm males. Of course, as with income data, these medians were affected by the distribution of occupations as well as the earnings levels for the same occupational group.

Table **VIII–10.**—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED IN ALL OCCUPATIONS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	2,277	4,007	5,006	124.9	219.9	176.0
Regions:						
Northeast	2,705	4,587	5,002	109.0	184.9	169.6
North Central	2,593	4,458	5,264	118.1	203.0	172.0
South	1,626	3,066	5,203	170.8	320.1	187.4
West	3,383	4,567	5,449	119.3	161.1	135.0
Divisions:						
New England	2,833	4,606	4,776	103.7	168.5	162.5
Middle Atlantic	3,003	4,582	5,065	110.5	168.7	152.6
East North Central	3,011	4,762	5,355	112.5	177.8	158.2
West North Central	2,340	3,811	4,965	130.3	212.2	162.9
South Atlantic	1,620	3,172	4,247	133.6	261.6	195.9
East South Central	1,377	2,707	4,014	148.3	291.5	196.6
West South Central	2,023	2,999	4,256	141.9	210.4	148.3
Mountain	3,117	4,155	5,024	121.0	161.2	133.3
Pacific	3,676	4,806	5,559	115.7	151.2	130.7

[1] Coefficient of variation among divisions: Rural farm, 29.84; rural nonfarm, 20.63; urban, 11.07.

Source: Retabulated and computed from data in 1960 Census of Population.

The earnings of males by occupation, for several of the major occupational groups, sorted by residence classification and region are shown in tables VIII–11 through VIII–16. The ratios of earnings of rural residents to urban also are shown including the coefficient of variation in earnings between geographic divisions. At the outset, it should be recognized that these occupational groups are relatively broad classifications. Thus, differences in earnings could result from regional or residence variations in occupations within a broad occupational group, or from differences in pay, or both.

The earnings level of professional, technical, and kindred occupations was high in the earnings scale of male occupations (table VIII–11). As with almost all income and earnings data, the earnings of urban residents in these occupations was above that of the other residence groups. For the United States as a whole, urban males in these occupations had median earnings one-fifth above their rural-nonfarm counterparts and two-fifths above rural-farm males in the same occupational group. In general, the ratio of urban to rural earnings levels was highest in the South where the absolute level was lowest.

It was not surprising to find that there was relatively little variation in earnings among geographic areas for professional and technical workers. The earnings were lower in the South, but this may have been due in part to the higher proportion of nonwhites in this occupational group in that region than elsewhere. Moreover, differences in living costs among the regions may have meant that the real earnings levels were not greatly different. The large differences in earnings levels among residence groups in the same geographic region cannot be explained on the basis of living costs. Either the persons living in rural-farm areas had sharply different preferences regarding living, were actually in different occupations, or they faced a labor market for their services which differed greatly from that in urban areas. Probably all three were involved. However, the labor market was undoubtedly an important factor, inasmuch as in the New England and Pacific Divisions the gap between the earnings of rural-farm and urban residents was much smaller—only 15 percent—than in other areas.

Table **VIII–11.**—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED AS PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	4,891	5,693	6,870	120.7	140.5	116.4
Regions:						
Northeast	5,761	6,527	6,931	106.2	120.3	113.3
North Central	5,197	5,663	7,013	123.8	134.9	109.0
South	4,184	4,917	6,384	129.8	152.6	117.5
West	6,034	6,099	7,215	118.3	119.6	101.1
Divisions:						
New England	5,684	6,631	6,584	99.3	115.8	116.7
Middle Atlantic	5,784	6,478	7,039	108.8	121.7	112.0
East North Central	5,566	6,077	7,237	119.1	130.0	109.2
West North Central	4,550	5,003	6,607	132.1	145.2	110.0
South Atlantic	4,357	5,206	6,521	125.2	149.7	119.5
East South Central	3,706	4,525	6,097	134.7	164.5	122.1
West South Central	4,415	4,622	6,340	137.2	143.6	104.7
Mountain	5,324	5,570	6,605	118.6	124.1	104.6
Pacific	6,461	6,415	7,433	115.9	115.0	99.3

[1] Coefficient of variation among divisions: Rural farm, 17.27; rural nonfarm, 14.56; urban, 6.43.

Source: Retabulated and computed from data in 1960 Census of Population.

The median earnings of urban males classified as craftsmen, foremen, and kindred workers were also about one-fifth above those of rural-nonfarm males and two-fifths above those of rural-farm males (table VIII-12). The geographic variation in earnings for this occupational group was lowest for urban residents, and highest for rural-farm males. It was modestly greater for each residence group than was the case for males classified as professional, technical, and kindred workers. As in other cases, the gap between the earnings of rural-farm and urban males was less in those geographic areas having the highest absolute level of earnings.

Table **VIII-12.**—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED AS CRAFTSMEN, FOREMEN, AND KINDRED WORKERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	3,878	4,656	5,442	116.9	140.3	120.0
Regions:						
Northeast	4,415	5,003	5,390	107.7	122.1	113.3
North Central	4,346	5,007	5,742	114.7	132.1	115.2
South	3,167	3,881	4,649	119.8	147.0	122.6
West	4,946	5,400	5,868	108.7	118.6	109.2
Divisions:						
New England	4,212	4,965	5,189	104.5	123.2	117.9
Middle Atlantic	4,456	5,019	5,457	108.7	122.5	112.6
East North Central	4,753	5,308	5,890	111.0	123.9	111.7
West North Central	3,606	4,187	5,291	126.4	146.8	116.2
South Atlantic	3,199	3,968	4,688	118.2	146.6	124.1
East South Central	2,991	3,582	4,485	125.2	149.9	119.7
West South Central	3,334	3,937	4,679	118.8	140.3	118.1
Mountain	4,586	5,004	5,434	108.6	118.5	109.1
Pacific	5,151	5,586	5,997	107.3	116.4	108.5

[1] Coefficient of variation among divisions: Rural farm, 19.09; rural nonfarm, 15.29; urban, 10.18.

Source: Retabulated and computed from data in 1960 Census of Population.

The earnings of males classified as operatives and kindred workers were uniformly lower than for those classified as craftsmen, foremen, etc. (table VIII-13). Within the operatives group, however, the earnings relationships were remarkably similar to those for other occupations. The median earnings of urban operatives were about one-fifth above rural-nonfarm operatives and more than two-fifths above rural-farm males in this group. The differentials generally were less in the areas where urban earnings were highest.

The median earnings of nonfarm laborers were, of course, lower than for occupations requiring more formal training, skills, or education (table VIII-14). The patterns for this group were somewhat different from other occupations. The differences in levels of earnings among the residence groups were somewhat larger, since urban laborers had median earnings about one-third higher than their rural-nonfarm counterparts and more than one-half higher than those living in rural-farm areas. The geographic variation in earnings levels of laborers was substantially higher than for other male occupational groups, but was not significantly higher for rural residents than for urban males.

Table VIII-13.—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED AS OPERATIVES AND KINDRED WORKERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	3,099	3,841	4,486	116.7	144.7	123.9
Regions:						
Northeast	3,855	4,265	4,460	104.6	115.7	110.6
North Central	3,847	4,444	4,907	110.4	127.6	115.5
South	2,290	2,981	3,440	115.4	150.2	130.2
West	4,088	4,606	4,959	107.7	121.3	112.6
Divisions:						
New England	3,434	4,115	4,296	104.4	125.1	119.8
Middle Atlantic	3,973	4,317	4,522	104.7	113.8	108.7
East North Central	4,187	4,661	4,997	107.2	119.4	111.3
West North Central	3,132	3,762	4,558	121.2	145.5	120.1
South Atlantic	2,411	3,045	3,374	110.8	140.0	126.3
East South Central	2,263	2,721	3,365	123.7	148.7	120.2
West South Central	2,118	3,063	3,615	118.0	170.7	144.6
Mountain	3,584	4,165	4,449	106.8	124.1	116.2
Pacific	4,357	4,844	5,081	104.9	116.6	112.2

[1] Coefficient of variation among divisions: Rural farm, 25.88; rural nonfarm, 19.63; urban, 15.37.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VIII-14.—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED AS LABORERS, EXCEPT FARM AND MINE, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	2,064	2,417	3,185	131.8	154.3	117.1
Regions:						
Northeast	2,863	3,196	3,704	115.9	129.4	111.6
North Central	2,811	3,129	3,611	115.4	128.5	111.3
South	1,467	1,740	2,255	129.7	153.8	118.6
West	3,302	3,609	3,596	99.6	108.9	109.3
Divisions:						
New England	2,285	2,752	3,351	121.8	146.7	120.5
Middle Atlantic	3,023	3,311	3,806	114.9	125.9	109.5
East North Central	3,065	3,305	3,734	113.0	121.8	107.8
West North Central	2,478	2,715	3,303	121.7	133.3	109.5
South Atlantic	1,435	1,789	2,336	130.6	162.8	124.7
East South Central	1,399	1,555	2,128	136.8	152.2	111.2
West South Central	1,676	1,816	2,220	122.2	132.4	108.4
Mountain	2,547	3,003	3,014	100.4	118.3	117.9
Pacific	3,725	3,963	3,843	97.0	103.2	106.4

[1] Coefficient of variation among divisions: Rural farm, 33.17; rural nonfarm, 30.40; urban, 30.82.

Source: Retabulated and computed from data in 1960 Census of Population.

It is interesting to note that in each region, the median income of farmers and farm managers was roughly the same as that of nonfarm laborers, even though the earnings of the former included a substantial return to owner-operated capital (table VIII–15). The earnings of farm laborers amounted to only one-half to two-thirds that of nonfarm laborers, indicating the generally low returns to labor in agriculture (table VIII–16). The geographic variation in the earnings of males employed in farming was as large as, or larger than, for any occupation. This was not surprising, however, since most of the labor force adjustment from agriculture has been out of the industry rather than geographic adjustment which would tend to reduce interregional variations in income. By and large, the number of urban farm managers and farm laborers was so small that the earnings by residence classification were not meaningful.

Table **VIII–15.**—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER EMPLOYED AS FARMERS AND FARM MANAGERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	2,114	1,902	3,365	176.9	159.1	90.0
Regions:						
Northeast	2,481	2,608	3,185	122.1	128.4	105.1
North Central	2,384	2,397	3,192	133.2	133.9	100.5
South	1,375	1,201	2,853	237.6	207.4	87.3
West	3,525	3,433	4,056	118.1	115.0	97.4
Divisions:						
New England	2,384	2,905	2,984	102.7	125.2	121.9
Middle Atlantic	2,505	2,500	3,269	130.7	130.5	99.8
East North Central	2,444	2,379	3,153	132.5	129.0	97.4
West North Central	2,347	2,409	3,219	133.6	137.1	102.6
South Atlantic	1,303	1,131	2,496	220.7	191.6	86.8
East South Central	1,159	885	1,852	209.4	159.9	76.4
West South Central	1,993	1,808	3,474	192.1	174.3	90.7
Mountain	3,337	3,281	4,320	131.7	129.4	98.3
Pacific	3,569	3,685	3,984	108.1	111.6	103.3

[1] Coefficient of variation among divisions: Rural farm, 34.28; rural nonfarm, 39.85; urban, 22.97.

Source: Retabulated and computed from data in 1960 Census of Population.

Several observations can be made at this point regarding the data on earnings by occupation for males and the relationship of these earnings to income differentials observed between residence groups. First, in those nonfarm occupations for which data were available, there was an amazing uniformity in the relative earnings differentials between residence groups. At the national level the median earnings of urban males in each of the nonagricultural occupations were roughly 20 to 25 percent above the earnings of rural-nonfarm males in the same occupation, and two-fifths to one-half above the earnings of rural-farm males. Usually, the higher the absolute level of earnings for an occupation in a region, the less will be the differences in earnings among the residence groups.

Table VIII-16.—MEDIAN EARNINGS AND EARNINGS RATIO OF MALES 14 YEARS OLD AND OVER, EMPLOYED AS FARM LABORERS AND FARM FOREMEN, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total............	1,036	1,058	1,321	124.9	127.6	102.1
Regions:						
Northeast............................	1,258	1,658	2,085	125.8	165.7	131.8
North Central........................	1,059	1,144	1,285	112.3	121.4	108.0
South..................................	845	840	1,046	124.6	123.9	99.4
West....................................	2,236	1,677	1,508	89.9	67.5	75.0
Divisions:						
New England..........................	1,436	1,817	1,959	107.8	136.4	126.5
Middle Atlantic......................	2,211	1,563	2,151	137.6	97.3	70.7
East North Central..................	1,033	1,079	1,351	125.2	130.7	104.4
West North Central..................	1,077	1,204	1,222	101.5	113.4	111.8
South Atlantic........................	800	893	1,393	156.0	174.3	111.7
East South Central..................	694	651	831	127.6	119.7	93.9
West South Central..................	1,199	936	915	97.7	76.3	78.1
Mountain...............................	2,053	1,484	1,357	91.5	66.1	72.3
Pacific..................................	2,463	1,780	1,564	87.9	63.5	72.3

[1] Coefficient of variation among divisions: Rural farm, 44.85; rural nonfarm, 32.63; urban, 30.56.

Source: Retabulated and computed from data in 1960 Census of Population.

In general, the more urbanized a given geographic region, the higher is the level of earnings within an occupation. This might be due to the following explanations: (1) the larger urban labor markets allow widespread specialization, resulting in higher productivity and earnings; (2) urban labor markets actually contain a substantially different array of industries, with a higher proportion having higher productivity and paying higher wages; (3) substantially different levels of living costs, and satisfactions in living in different areas, require large differences in money earnings to provide the same level of real income; or (4) the supply of labor in different areas results in significantly different earnings which are not altered by migration.

Probably all of these explanations have some validity, but the idea that the large differences in money earnings actually represent comparable real income and satisfaction to the recipients seems least likely. The more urbanized geographic areas have a different industrial structure than the less urbanized areas, probably resulting in an unequal distribution of high paying industries. In addition, there probably are real differences in skills and abilities required within occupational categories, and these may not be distributed equally among geographic areas or residence groups. Finally, given the chronically low income levels in farming, farmers, farm laborers, and members of their families have been moving to nonfarm employment steadily for more than two decades. This shifting results in a potential supply of workers in rural-farm areas willing to accept alternative employment sufficient to depress earnings of rural residents below those in comparable occupations in urban areas. The greatest disparity between rural and urban earnings is evident in the South, where this pressure has been greatest because of the very low earnings in agriculture.

Only three distributions were available on earnings for females by occupation and by residence classification. They were: all occupations, clerical and kindred workers, and operatives and kindred workers. While the geographic differences in earnings of females generally ran in the same direction as for males, the differences between residence groups did not. For instance, the median level of earnings of females in all occupations was highest in the Pacific and Middle Atlantic Divisions. The median level of earnings of urban females in the conterminous United States was 36 percent higher than for rural-nonfarm females and 73 percent higher than for rural-farm females (table VIII–17). However, the income ratios were not related to the absolute level of the earnings in urban areas. Thus, in the Pacific Division, where the level of earnings of urban females was highest, the gap between the urban and rural-farm segments was greatest. In addition, unlike the distributions for males, the coefficient of variation—which measures the geographical variation—was not appreciably higher for rural than for urban females.

Table **VIII–17.**—MEDIAN EARNINGS AND EARNINGS RATIO OF FEMALES 14 YEARS OLD AND OVER EMPLOYED IN ALL OCCUPATIONS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	1,366	1,736	2,367	136.3	173.3	127.1
Regions:						
Northeast	1,802	2,153	2,504	116.3	138.9	119.5
North Central	1,477	1,782	2,405	135.0	162.9	120.6
South	1,188	1,456	1,918	131.7	161.5	122.6
West	1,355	1,721	2,636	153.2	194.5	127.3
Divisions:						
New England	1,754	2,181	2,432	111.5	138.7	124.3
Middle Atlantic	1,817	2,142	2,618	122.2	144.1	117.9
East North Central	1,718	2,013	2,515	124.9	146.4	117.2
West North Central	1,257	1,388	2,144	154.5	170.6	110.4
South Atlantic	1,178	1,623	2,069	127.5	175.6	137.8
East South Central	1,252	1,364	1,695	124.3	135.4	108.9
West South Central	1,115	1,136	1,791	157.6	160.7	101.9
Mountain	1,188	1,513	2,169	143.4	182.6	127.4
Pacific	1,462	1,832	2,787	152.1	190.6	125.3

[1] Coefficient of variation among divisions: Rural farm, 19.66; rural nonfarm, 22.07; urban, 16.48.

Source: Retabulated and computed from data in 1960 Census of Population.

Part of the large urban-rural difference in female earnings was due to the varying occupational distributions between residence groups and geographic regions. This is indicated in tables VIII–18 and VIII–19, which show the median earnings levels for clerical workers and operatives. For clerical workers, the median earnings of urban females averaged about 25 percent higher than for rural-nonfarm women and 40 percent above their rural-farm counterparts.

However, the geographic variation was small for all residence groups. Again, there was no apparent relationship between the absolute level of earnings in urban areas and the relative earnings of rural females.

Table VIII-18.—MEDIAN EARNINGS AND EARNINGS RATIO OF FEMALES 14 YEARS OLD AND OVER EMPLOYED AS CLERICAL AND KINDRED WORKERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	2,226	2,503	3,098	123.8	139.2	112.4
Regions:						
Northeast	2,464	2,697	3,176	117.8	128.9	109.5
North Central	2,173	2,398	3,042	126.9	140.0	110.4
South	2,217	2,423	2,893	119.4	130.5	109.3
West	2,262	2,616	3,282	125.5	145.1	115.6
Divisions:						
New England	2,363	2,645	2,932	110.8	124.1	111.9
Middle Atlantic	2,495	2,724	3,247	119.2	130.2	109.2
East North Central	2,358	2,569	3,142	122.3	133.2	109.0
West North Central	1,907	2,083	2,732	131.1	143.3	109.2
South Atlantic	2,306	2,527	3,023	119.6	131.1	109.6
East South Central	2,192	2,354	2,730	116.0	124.6	107.4
West South Central	2,082	2,191	2,787	127.2	133.9	105.3
Mountain	1,913	2,332	2,839	121.8	148.4	121.9
Pacific	2,509	2,782	3,384	121.6	134.9	110.9

[1] Coefficient of variation among divisions: Rural farm, 10.19; rural nonfarm, 9.78; urban, 7.92.

Source: Retabulated and computed from data in 1960 Census of Population.

Table VIII-19.—MEDIAN EARNINGS AND EARNINGS RATIO OF FEMALES 14 YEARS OLD AND OVER EMPLOYED AS OPERATIVES AND KINDRED WORKERS, BY RESIDENCE, REGIONS, AND DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and division	Median earnings (dollars)[1]			Earnings ratio		
	Rural farm	Rural nonfarm	Urban	Urban to rural nonfarm	Urban to rural farm	Rural nonfarm to rural farm
United States, total	1,899	2,102	2,352	111.9	123.8	110.7
Regions:						
Northeast	2,132	2,244	2,375	105.8	111.4	105.2
North Central	2,037	2,268	2,682	118.3	131.6	111.3
South	1,870	2,010	2,018	100.4	108.0	107.5
West	1,158	1,437	2,369	164.8	204.6	124.1
Divisions:						
New England	2,105	2,311	2,380	103.0	113.1	109.8
Middle Atlantic	2,139	2,218	2,374	107.1	111.0	103.7
East North Central	2,217	2,447	2,822	115.3	127.2	110.3
West North Central	1,714	1,755	2,298	131.0	134.1	102.4
South Atlantic	1,954	2,093	2,123	101.4	108.6	107.1
East South Central	1,885	1,902	2,017	105.7	107.0	101.2
West South Central	1,500	1,4[illegible]	1,693	116.5	112.8	96.9
Mountain	895	1,239	1,894	152.9	211.7	138.5
Pacific	1,260	1,486	2,448	164.7	194.3	118.0

[1] Coefficient of variation among divisions: Rural farm, 25.61; rural nonfarm, 22.51; urban, 15.09.

Source: Retabulated and computed from data in 1960 Census of Population.

The same situation held for females employed as operatives (table VIII-19). In this case, the geographic variation in earnings levels was somewhat higher for rural than for urban residents. It is perhaps worth noting that although the absolute level of earnings of female operatives was well below that of male operatives, the relative variation in earnings among geographic regions was almost identical for both sexes in each residence group.

Thus, while the pattern was different for women and men, for both sexes there was a significant difference in earnings among residence groups by occupation. Urban residents obtained higher earnings in each occupation than did rural residents. Generally, the earnings in each occupation were highest in the Northeast Region and the Pacific Division, and lowest in the East South Central Division. However, the geographic variation in earnings was inversely related to the skills and education required for the occupation; that is, there was less geographic variation in the earnings of professional workers than in the earnings of laborers.

Distance, earnings levels, and earnings differentials

The fact that in every occupation and in every region the earnings of rural-farm residents were the lowest of all the residence groups suggests that there may be a strong relationship between proximity to an urban-industrial concentration and earnings by occupation. The earnings data for two occupations were used to test this hypothesis, namely, operatives and kindred workers and farmers and farm managers. These two occupations were used because (1) the occupational category of farmers and farm managers was the most common one for rural-farm males, (2) operatives formed a major occupational group for rural-nonfarm males, and (3) employment as an operative was most common for a rural-farm male not employed in agriculture.

The procedure to test the relationships was as follows: For each county, the median earnings of operatives and the median earnings of farmers and farm managers were computed without regard to residence category. From this computation, the difference between the median earnings of operatives and the median earnings of farmers in the same county was determined. In addition, the difference between the median earnings of operatives in the local county and that in the nearest standard metropolitan statistical area county was computed.

Thus, for each county, three sets of data were available indicating the earnings differentials between: (1) local operatives and operatives in the nearest SMSA, (2) local operatives and local farmers, and (3) local farmers and operatives in the nearest SMSA. Then, all of the counties in a division, region, and the conterminous United States were sorted by the distance variable described in chapter I, p. 17, measuring distance from the nearest SMSA. The mean values of the earnings differentials were then computed for each division, and region, and for the United States. The results of these computations are shown in tables VIII-

20 and VIII–21, along with the results of the statistical tests used to determine significant differences between the observed values.

The data in table VIII–20 suggest that the median earnings of operatives in SMSA's were usually higher than the earnings of operatives outside SMSA's and that the differentials tended to rise with distance from the SMSA—at least up to a point. There were some exceptions, the most noticeable being those in the West North Central and the Mountain Divisions, where operatives outside SMSA's had significantly higher earnings than did those in SMSA counties. Where the differentials were in favor of operatives in SMSA counties, they were generally not large, except in the East North Central, East South Central, and South Atlantic Divisions.

Table **VIII–20.**—Differential in Median Earnings of Operatives and Kindred Workers in Standard Metropolitan Statistical Area Counties and Median Earnings of This Occupational Category in Counties Located at Specified Distances From an SMSA, by Divisions, for the Conterminous United States: 1960

Division	Distance from nearest SMSA[1]					
	Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 to 249 miles	250 miles or more
United States, total	[2]334	[2]711	[2]736	114	[2]-517	155
New England	[2]171	[2]290	[2]492	[2]422	-	151
Middle Atlantic	[2]265	[2]514	[3]499	647	-	-
East North Central	[2]423	[2]824	[2]941	[2]1,060	[3]973	-
West North Central	[2]-480	[2]509	[2]1,135	142	[2]-1,035	96
South Atlantic	[2]573	[2]924	[2]714	-	-	-
East South Central	[2]748	[2]1,147	[2]995	-	-	-
West South Central	[2]192	[2]459	[2]565	164	-	-
Mountain	[2]-1,342	-16	[2]179	[2]-77	[2]-231	198
Pacific	[2]303	[2]554	[2]477	[2]137	[2]267	[3]981

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

[2] Value significantly different from zero at the .01 percent level.

[3] Value significantly different from zero at the .05 percent level.

Source: Retabulated and computed from data in 1960 Census of Population.

The earnings differentials between operatives relative to distance from an SMSA were substantially lower than those found in table VIII–13 relating to residence. The maximum mean difference for the United States was just over $700 for operatives 100 to 149 miles from an SMSA, compared to the $1,400 differential between urban and farm males employed as operatives. This, together with the earlier finding that the frequency of employment of rural-farm males as operatives was positively related to proximity to SMSA's and city size, indicated that the relative disparity of earnings of this group as operatives could not be accounted for by the fact that these males usually lived in areas distant from cities. The only conclusion consistent with all of these findings is that rural-farm males, regardless of their location relative to urban-industrial development, tended to be employed in industries or in occupations that yielded significantly lower earnings than received by urban males in the same areas. *This implies* *that the earnings differentials are a function of characteristics of the rural-farm labor force rather than of the operation of the labor market.*

Data on the average earnings differentials between operatives and farmers for counties varying in location relative to an SMSA, are shown in table VIII–21. These data show that there was an earnings differential in favor of operatives, but that it went down rather than up as distance from an SMSA increased. This is contrary to expectations, and contrary to the hypothesis that the labor market, in which transfers in employment from one occupation to another occur, "works better" near urban-industrial areas and reduces income differences between farm and nonfarm jobs. Indeed, the higher income differentials close to an SMSA would lead to almost the reverse hypothesis. Thus, the income differences between farmers and other occupational groups did not appear to be closely related to proximity to areas of urban-industrial development.

Table **VIII–21**.—DIFFERENTIAL IN MEDIAN EARNINGS OF OPERATIVES AND KINDRED WORKERS, AND FARMERS AND FARM MANAGERS LOCATED AT SPECIFIED DISTANCES FROM A STANDARD METROPOLITAN STATISTICAL AREA, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division	Inside SMSA counties	Distance from nearest SMSA[1]					
		Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 to 249 miles	250 miles or more
United States, total	[2]1,304	[2]1,554	1,098	[3]625	[2]534	[2]553	[2]605
New England	[2]1,466	[2]1,442	[2]1,420	[2]1,351	749	-	787
Middle Atlantic	[2]1,617	[2]1,599	[2]1,546	[2]1,564	916	-	-
East North Central	[2]2,181	[2]1,924	[2]1,736	[2]1,815	[2]1,988	[2]2,263	-
West North Central	[2]1,667	[2]1,446	[2]1,183	[3]902	[2]279	-34	[2]415
South Atlantic	[2]1,559	[2]1,421	[2]1,058	[2]1,029	-	-	-
East South Central	[2]2,080	[2]1,498	[2]1,247	[2]1,064	-	-	-
West South Central	[3]893	[2]1,228	[3]630	[2]-832	-554	-	-
Mountain	[2]841	[2]1,946	[2]555	67	[2]496	[2]858	[2]945
Pacific	[2]1,205	[2]1,996	[2]1,051	[3]435	[2]1,047	[2]1,577	[3]825

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

[2] Value significantly different from zero at the .01 percent level.

[3] Value significantly different from zero at the .05 percent level.

Source: Retabulated and computed from data in 1960 Census of Population.

The data in table VIII–22 show the relationship between the gain in earnings farmers could expect by changing occupations to become operatives in their present county of residence and the gain they might receive by becoming operatives in the nearest SMSA. It shows that the greatest relative gains from migration would occur in the West North Central Division and in the South. These, of course, are the areas from which out-migration of the rural-farm population has been greatest. Indications are that there still are economic pressures for further migration as contrasted to taking local nonfarm jobs without changes in residence.

Table VIII-22.—PERCENTAGE THAT GAIN EXPECTED IN EARNINGS BY CHANGING JOBS LOCALLY IS OF GAIN POSSIBLE BY MIGRATION TO THE NEAREST STANDARD METROPOLITAN STATISTICAL AREA (FARMERS AND FARM MANAGERS TO OPERATIVES AND KINDRED WORKERS), BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division	Distance from nearest SMSA[1]					
	Less than 50 miles	50 to 99 miles	100 to 149 miles	150 to 199 miles	200 to 249 miles	250 miles or more
New England	89	83	73	64	-	84
Middle Atlantic	86	75	76	59	-	-
East North Central	82	68	66	66	70	-
West North Central	150	70	44	66	(2)	81
South Atlantic	71	53	59	-	-	-
East South Central	65	52	52	-	-	-
West South Central	86	58	(2)	(2)	-	-
Mountain	322	103	27	118	137	83
Pacific	87	65	48	88	86	46

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

[2] Median income of farmers and farm managers was above that of operatives.

Income changes over time

Income data have been improved substantially with each succeeding census, but the improvements have reduced the comparability of data from various censuses. Therefore, it was difficult to compare the different income measures over time. For our purposes, only data on income of persons from the 1950 and 1960 censuses were used.

Personal income rose substantially over the 1950 to 1960 decade, but the rise was not at an equal rate in all components of the population (table VIII-23). For instance, the median income of males increased by two-thirds in the decade, while for females it increased by only one-third. The greatest disparity was in the urban component of the population, where the percentage increase in the median income of males was more than twice that of females. In the rural-farm component, the rate of increase over the decade was slightly higher for females than for males, reflecting the general lag in income from agriculture and the heavy dependence of rural-farm males upon this source of income.

The income ratio of nonwhites to whites also has changed over the decade. For the total population, there was a very modest increase in the relative position of nonwhite males, and a very marked increase in the income of nonwhite females relative to white females. This increase in the total, however, was the result of two shifts—one, the change in the relative income position within a given residence component; and the second, a major increase in the proportion of the nonwhites living in urban areas.

Within the different residence components, the changes in the relative income position of nonwhites actually have been generally adverse. The median income of

Table VIII-23.—SELECTED MEASURES OF INCOME OF PERSONS, BY RESIDENCE, SEX, AND COLOR, FOR THE UNITED STATES: 1960 AND 1950

Selected measure	Total				Rural farm				Rural nonfarm				Urban			
	Male		Female		Male		Female		Male		Female		Male		Female	
	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950
MEDIAN INCOME (In dollars)																
Total	4,103	2,434	1,357	1,029	2,098	1,339	731	458	3,297	2,072	972	716	4,532	2,783	1,532	1,227
White	4,319	2,572	1,441	1,137	2,283	1,489	826	533	3,537	2,183	1,017	784	4,792	2,917	1,637	1,325
Nonwhite	2,273	1,341	909	584	778	577	367	311	1,270	975	493	374	2,794	1,749	1,105	764
INCOME RATIO																
1960 vs. 1950	-	1.69	-	1.32	-	1.57	-	1.60	-	1.60	-	1.39	-	1.63	-	1.25
Nonwhite vs. white	.53	.52	.63	.51	.34	.39	.44	.58	.36	.45	.48	.48	.58	.60	.68	.58
Rural farm vs. urban:																
Total	-	-	-	-	.46	.48	.48	.37	-	-	-	-	-	-	-	-
White	-	-	-	-	.48	.51	.50	.40	-	-	-	-	-	-	-	-
Nonwhite	-	-	-	-	.28	.33	.33	.41	-	-	-	-	-	-	-	-
Rural nonfarm vs. urban:																
Total	-	-	-	-	-	-	-	-	.73	.74	.61	.58	-	-	-	-
White	-	-	-	-	-	-	-	-	.74	.75	.62	.59	-	-	-	-
Nonwhite	-	-	-	-	-	-	-	-	.45	.56	.45	.49	-	-	-	-

— Represents zero.

Source: 1960 Census of Population, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, table 97.

urban nonwhite males was 60 percent of that of urban white males in 1950 but only 58 percent in 1960. For rural-nonfarm nonwhite males the respective figures for the same periods were 45 and 36 percent. For rural-farm nonwhite males, the figures were 39 and 34 percent, respectively. The only rise in the relative income position of nonwhites over the decade occurred among urban nonwhite females.

It should not be inferred from these data, however, that the labor market has worked adversely for nonwhites during the 1950 to 1960 decade. The very large migration of nonwhites from rural-farm to rural-nonfarm and urban residences has resulted in significant improvements in the income of the migrants. Moreover, the migration has appreciably altered the demographic characteristics of the population in rural areas. Thus, the massive out-migration of rural-farm nonwhites has left a population in which the age structure alone would cause one to expect a decline in relative income levels of those remaining.

The changes over the decade in the income level of rural-nonfarm and rural-farm residents compared with urban residents are of interest. The level of both rural-farm and rural-nonfarm males has declined modestly. This decline was true of both whites and nonwhites. In the case of females there was a relative improvement for both the rural-farm and rural-nonfarm groups attributable solely to the improvement in the relative position of white females, which offset a decline in the relative income of rural nonwhite females.

In general, the average levels of income and the median income have risen substantially in each of the components of the population. The major out-movement from rural areas has resulted in higher incomes for those who have left, but it has not resulted in a substantial improvement in the relative position of those who have remained. It may be, however, that the migration so altered the rural-farm population over the decade that the figures that show a relative decline in income actually represent an improvement for the remaining population group measured separately.

Summary and conclusions

Regardless of the particular measure used, the median income of rural people in the United States was well below that of the urban population. The greatest gap was between the rural-farm and the urban populations with the rural-nonfarm group occupying an intermediate position. These income differentials were not new but have persisted over several decades. Indications are that over the past decade the gap has widened, at least for the males.

These differentials arose from several sources. First, there were major differences in the occupational distribution of employed persons in urban and rural areas. A larger proportion of the urban labor force is employed in occupations in which earnings are higher, especially among white males. Second, on the average, urban workers receive substantially higher earnings within all nonfarm occupations than do rural workers. The differences in earnings by occupation do not, however, appear to be primarily a function of location relative to urban-industrial areas. Instead, they would appear to arise because of the difference in characteristics between the labor force in rural-farm and urban areas.

The urban-rural income differences vary in magnitude from area to area in the country. The differences generally are greater in the South. This is because the South has lower earnings levels in all occupations and has a higher proportion of persons employed in lower paying occupations. Greater attention will be given to the factors accounting for income variations within residence groups in chapter IX.

NOTES

[1] See Herman P. Miller, "Income Distribution in the United States," a 1960 Census Monograph (Washington, D.C.: U.S. Government Printing Office, 1966.)

[2] Dale E. Hathaway, *Government and Agriculture* (New York: Macmillan and Company, 1963), p. 38, table 4.

[3] *Ibid.*

[4] A family consists of two or more persons living in the same household who are related to each other by blood, marriage, or adoption; all persons living in one household who are related to each other are regarded as one family. *1960 Census of Population*, Vol. I, *Characteristics of the Population*, Part 1, United States Summary, p. LVIII.

[5] It should be noted that the medians were computed from class intervals assuming a uniform distribution of values within a class interval.

[6] It should be noted that there are relatively few nonwhite rural-farm families outside of the South so that the comparisons are less meaningful.

[7] In the case of income or earnings of farm operators from farming, part of the income attributed to them may be returns to unpaid family labor.

CHAPTER IX

INTERCOMMUNITY DIFFERENCES IN INCOME

Introduction

In chapter VIII several measures of income were discussed and the income levels in rural America in 1960 were described. In addition to the large differences in median incomes observed among urban, rural-nonfarm, and rural-farm families, there were wide geographic differences in income levels. This chapter reports an analysis of some of the factors which account for these differences and furnishes an explanation of the income differences found in rural areas.

Underlying the analysis are three broad categories of variables presumed to be the sources of the wide differences in income levels among communities. These variables include (1) social and demographic characteristics of the population which affect economic productivity; (2) the economic structure of communities, for example, employment patterns and employment opportunities; and (3) location of communities relative to metropolitan centers.

A statistical model was constructed to attempt to explain the differences in income among communities. The model was a multiple regression analysis with median family income as the dependent variable. Family income was used because it was more representative of the material well-being in rural areas than other income measures. The county was the unit of observation for the analysis. Except in the South, the analysis was done only for white family income because nonwhites constituted such a small portion of the rural population outside of that region. For the South, a separate analysis was made using nonwhite family income as the dependent variable.

Hypotheses underlying the analyses

Basically, the analyses tested three major hypotheses: (1) that variables representing the social and demographic characteristics of the population, the economic structure, and location of the community would explain a significant proportion of the intercommunity differences in family income of rural families; (2) that individual factors (that is, age, location, etc.) had varying effects upon income in different geographic regions of the Nation; and (3) that certain factors did not influence the income of rural-farm families in the same way as rural-nonfarm families.

The first hypothesis, relating to the factors explaining income, tested by multiple regression analysis, was analyzed at the national, regional, and divisional levels for the rural-farm and rural-nonfarm family income. Only the results of the national and regional analyses are presented here because of space limitations.[1]

The second hypothesis, based on the assumption that different factors have varying influences upon income in different regions, was tested by the use of multiple comparison tests of the results among the regions.[2] This procedure made it possible to judge whether a given variable had more, or less, effect upon income in one region than it had in another.

The third hypothesis, that different factors had different influence on income by residence groups, was tested by multiple comparison tests between the rural-farm and rural-nonfarm equations for each region. Originally the intention was to include results for the urban population, but the results for this residence group were such as to limit their utility.

Variables used in the analyses

The dependent variable used in the regression analysis as a measure of the material well-being of a rural community was median family income. Three broad categories of variables—consisting of 13 independent variables—presumed to influence the income level in rural communities were selected. What follows is a brief description of these variables and their hypothesized effects on the material well-being in rural communities.

Social and demographic factors. The five variables in this group deal with age, education, and family size.

Age. Numerous studies have shown that, other things being equal, income is a function of age. The very young (under 25) and those over 65 generally have lower incomes than those in their middle years. Hence, intercommunity income can vary because of differences in the age distributions among communities. To take this factor into account, two age variables were included. The first was the percent of rural-farm males, aged 15 to 24 years; the second, the percent of those aged 25 to 44 years.

Education. Two variables were used to measure the effect of educational achievement on income. The percentage of rural-farm males, aged 25 and over, who had completed 0 to 6 years of formal education was included because it was believed that individuals with 6 years or less of formal education were likely to be greatly handicapped in the modern economy. They are often unable to qualify for skilled occupations, and even within the less skilled occupations their progress may be restricted. A rural community with a relative prevalence of such males could be expected therefore, to have a low-income level relative to other communities. The percentage of rural-farm males, aged 25 and over, who had completed at least 12 years of formal schooling was the other education variable included. Persons with at least a high school education, it was believed, generally would be qualified, insofar as formal education was concerned, for skilled occupations, further training, and/or upward mobility is the modern labor market.

Family size. It was presumed that large families could have more of their members in the labor force than small families and, therefore, would have higher total incomes. Thus, to adjust for family size differences among communities, average rural-farm white family size was included as a variable in the analysis.

Economic factors. It was hypothesized that the income level in a specific community was, in part, a function of certain economic characteristics of that community. These characteristics included the occupational structure of the labor force, unemployment levels, and the level of capital accumulation. Seven variables were included in this group.

Occupation of males. The occupational structure was represented by these four variables presented as the following percentages of total male employment: (1) farmers and farm managers, (2) farm laborers and farm foremen, (3) operatives and kindred workers, and (4) craftsmen and foremen. These four occupations accounted for a high proportion of all male employment in rural communities. All data indicated that farm laborers and farmers generally had lower earnings that those in other occupations. Therefore, it was presumed that family income would be directly related to the proportion of males employed as craftsmen and operatives and inversely related to the proportion employed as farmers and farm managers, and farm laborers and farm foremen.

Labor force participation of females. It was assumed that the greater the proportion of employed females, the more female family members who would be employed and the higher would be family income. The variable of female employment was included to take into account the differences among counties in the labor force participation rate of females.

Unemployment of males. It was hypothesized that unemployment which is usually higher in urban areas and backs up in rural areas by restricting labor outflow from rural areas into more remunerative urban employment, lowers rural income levels. In recognition of this situation, the percent of the labor force which was unemployed was used as a variable. The unemployment statistics were those for the census enumeration period in 1960, whereas the income data were for the entire year 1959. It was hoped, however, that this variable would serve as a proxy for the general level of excess supply of labor at the then-existing earnings level.

Capital accumulation. Income in rural communities comes not only from labor earnings, but also importantly from returns to capital and land, especially in agriculture. To attempt to take into account the differences among counties in the level of capital accumulation in agriculture, the average value of farm land and buildings per farm per county was included as a variable in the analyses of income in rural-farm communities. Of course, it was excluded from the analyses of rural-nonfarm income.

Ecological factors. It was believed that the income level of a rural community would be influenced by the location of the community relative to metropolitan centers. In chapter I, three measures of proximity to metropolitan centers were discussed. In the income analyses, each of the three measures was included alternately. The size-distance$_1$ variable appeared, on the average, to account for more variance than the other two measures in income levels among communities. Accordingly, the results of the analyses with the size-distance $_1$ variable are discussed.

The size-distance$_1$ variable represents the premise that proximity to a metropolitan center, as well as the size of the metropolitan center, affects the income levels. Income was expected to decrease with increasing distance from a metropolitan center and to decrease as the size of the influencing metropolitan center decreased. Because of the construction of the size-distance$_1$ variable, these hypotheses would tend to be borne out if the sign of the regression coefficient of the variable was positive.

Intercommunity differences in rural-farm income levels

Some of the results of the analyses of rural-farm white family income per county for each region and for the conterminous United States are presented in table IX–1; more complete results in the appendix. The beta coefficients can be regarded as standardized partial regression coefficients, and as such constitute some indication of the importance of the variable in accounting for the variance in the dependent variable relative to other variables in the equation.

Social and demographic factors. According to the hypotheses, a relative prevalence of males, aged 15 to 24, may have either a positive or negative effect on income levels, depending upon the predominant income position of males aged 45 and over in the county.[3] A relative prevalence of males aged 25 to 44 would have a positive effect.

The effects of the age composition of rural-farm white males on the income level of rural-farm white families were, in general, small and relatively unimportant. For the Nation as a whole, it appeared that differences among counties in the age composition of these males did not account for any of the variation in income levels, except in the Northeast and the South. In the South, a relative prevalence of this group, aged 45 and over, appeared to depress the income level of rural-farm white families. In the Northwest, rural-farm white families in those counties with more males in the 15 to 24 age group than in the 45 and over group had higher incomes. The age composition seemed to have no effect in the North Central Region and the West.

Table IX-1.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO INCOME LEVEL OF RURAL-FARM WHITE FAMILIES, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

[In beta coefficients]

Selected characteristic	United States	Northeast	North Central	South	West
SOCIAL AND DEMOGRAPHIC					
Age of rural-farm white males:					
Percent 15 to 24 years old	.0167	[1].2448	.0187	[1].0801	-.0114
Percent 25 to 44 years old	.0106	.1266	.0213	[1].0720	.0001
Education of rural-farm white males, 25 years old and over:					
Percent with 0 to 6 years of school completed	[1]-.4912	-.0122	-.0221	-.0147	[1]-.0934
Percent with 12 years or more of school completed	[1].0604	[1]-.2134	[1].1676	.0199	-.0311
Average size of rural-farm white family	[1].1241	-.0265	[1].0866	[1].0839	[1]-.0798
ECONOMIC					
Occupation of rural-farm white males:					
Percent farmers and farm managers	-.0353	[1].2986	-.0765	[1]-.2638	.0985
Percent farm laborers and farm foremen	[1].1725	-.2542	-.0087	[1]-.1008	.0535
Percent operatives and kindred workers	[1].0415	-.1229	[1].3802	[1]-.1143	.0808
Percent craftsmen, foremen, and kindred workers	-.0202	.0332	-.0374	[1]-.0753	.0362
Employment of rural-farm white females	[1].1356	-.0784	[1].1084	[1].1403	.0032
Unemployment rate of white males	[1].2132	[1].2039	[1].2170	[1]-.1091	[1].1391
Average value of farmland and buildings	[1].0468	[1].2318	[1].1110	[1].0834	[1].1026
ECOLOGICAL					
Proximity to SMSA and size	[1].3423	[1].3740	[1].3285	[1].5297	[1].6819
Multiple correlation coefficient	.4915	.2816	.5374	.3787	.5142

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

For the Nation as a whole, education of rural-farm white males was the most important factor in accounting for differences among counties in the income level of rural-farm white families. A large number of rural-farm white males with little or no education ("functional illiterates") in a county depressed the income level of rural-farm white families; a relative prevalence of highly educated males had a positive effect on the income level. These results supported the hypothesis that low levels of formal education impede farm-nonfarm migration, and bar most individuals with little or no education from any but the most menial, low wage jobs. In agriculture these individuals may not be able to gain control of optimum amounts of capital because they have little knowledge of credit sources, and they may not be able to convince lenders that they have the knowledge of farming and the managerial ability to be good credit risks.

Clearly, a substantial amount of functional illiteracy among rural-farm white males partially accounted for the low income levels of rural-farm white families in the South relative to other regions. On the average, 31 percent of the rural-farm white males in southern communities had completed less than 7 years of formal education. This compared with an average of 12 percent in Northeastern and North Central counties, and 11 percent in Western counties.

At the regional level, the effects of the education factor were more mixed and less important than others, due in part to its more homogeneous nature in counties within each region. The effect of a prevalence of functional illiteracy among rural-farm white males was negative in every region, and significant only in the West, while the influence of a relative prevalence of rural-farm males of this group with at least a high school education was very mixed. In the North Central Region a high incidence of these individuals had a marked positive effect on the income level of rural-farm white families. The unexpected negative effect of highly educated rural-farm white males in the counties of the Northeast was inexplicable.

There appeared to be no statistical differences among regions in the effects of variations in the prevalence of poorly educated males, but there were regional differences when there was a prevalence of rural-farm white males with at least a high school education. The effects of this situation were greater in North Central rural communities than in other regions. This may be due, in part, to a relatively greater demand for highly educated males in rural communities in the North Central Region where the opportunities for part-time nonfarm employment and migration to local nonfarm jobs may be more available to the better educated males than in other sections of the country. Also, at least in the East North Central Division, counties were, on the average, closer to urban concentrations than in most regions. Hence, in the North Central Region more of the better educated persons may maintain farm residences and commute to jobs in urban areas.

The size of the average rural-farm white family was included as an independent variable to adjust income levels for differing sizes of families. For the Nation as a whole, income levels were positively related to family size. Similar relationships appeared to hold for the North Central and Southern Regions. However, for the Western Region, the larger the average size of family, the lower the income level. This negative effect of family size on income levels in the Western Region appeared to be significantly different from the positive effects in the North Central and Southern Regions.

Economic factors. The percentages of farmers and farm managers and farm laborers and farm foremen were included as variables to measure the effects of agricultural employment on the income level of rural-farm white families. The occupational categories of operatives and kindred workers and craftsmen, foremen, and kindred workers were included as variables on the presumption that these groups provided most of the alternative nonfarm employment opportunities for people in agriculture. The more numerous operatives and craftsmen were in the rural labor force, the greater was the opportunity for farm-nonfarm job migration and for part-time nonfarm employment. Thus the effects of the variables for farmers and farm laborers were expected to be negative, while those of the operatives and craftsmen were expected to be positive.

For the Nation as a whole, the prevailing number of farmers, operatives, and craftsmen were all negatively related to income, and the relative prevalence of farm laborers and the average value of farmland and buildings per farm were positively related. With this additional information, the results in table IX–1 for the Nation become reasonable and consistent with expectations.

The prevalence of operatives over farmers among rural-farm white males in a county resulted in higher rural-farm income. The positive effect of a prevalence of farm laborers was, in fact, a reflection of the positive effect of large farms (in terms of land and capital) on rural-farm income levels. On the average, operatives were found relatively more often in Southern rural-farm communities than elsewhere in the country. Clearly, the total effects of the occupational distribution on the income levels of white rural-farm communities were overshadowed by other factors. Nevertheless, as alternative nonfarm employment opportunities increased in a county, migration from farm to part- and full-time operative occupations appeared to have occurred, with an increase in income levels as a result.

The results of the regional analyses were mixed and, for some regions, difficult to interpret. For the North Central Region, they were quite similar to the findings at the national level in that prevalence of operatives implied an absence of farmers. Hence, the more operatives and the fewer farmers compared to other occupations in a county, the higher was the rural-farm income level. This partially accounted for the higher income levels in the East North Central counties where, on the average, operatives were more than twice as numerous as elsewhere in the region. Clearly, nonfarm employment opportunities in local nonfarm labor markets were very important contributors to income levels in the North Central Region.

In the South, the situation was quite different. Compared with occupational groups not included in the analysis—in general, laborers (nonfarm) and white-collar occupations—large numbers of farmers, farm laborers, operatives, or craftsmen all depressed white rural-farm income levels. But, a comparative preponderance of farmers was about twice as important in depressing income levels as the other occupational groups analyzed. Indeed farming and agricultural employment in general was second in importance only to the residence or location factor in explaining intercounty income differences of whites. Moreover, local nonfarm labor markets did not seem to provide attractive nonfarm employment opportunities to Southern white farmers. This was further supported by the extensive migration from Southern farms to the North and West in recent decades. Alternative nonfarm employment opportunities appeared to occur outside rather than inside the region.

None of the occupational variables seemed to account for any of the intercounty differences in rural-farm income levels in the West. This lack of significance of the occupational variables may have been due partly to the extreme variation in the types of farming found in the region, the concentration of industry in two of the States involved—California and Washington—and the concentration of urban population in relatively few metropolitan areas. Nevertheless, it was clear that economic factors other than differences in the occupational composition were important.

In the Northeast, the occupational variables were interrelated with other variables and with themselves. In general, an increase in the prevalence of farmers, employed rural-farm females, rural-farm males aged 25 to 44 years, and rural-farm males with at least a high school education increases the rural-farm income level in a county. It may be that the effects of age, education, and labor force participation of rural-farm females masked any depressing effect of a relatively large number of farmers.

It was expected that there would be a negative relationship between the income level of rural-farm white families and the unemployment rate of white males. However, it was recognized that the variable used (census enumeration period) was a poor substitute for the average unemployment rate for the year.

For the Nation and for all regions except the South, the higher the unemployment rate the higher was the rural-farm income level. In general, within a county, unemployment was lowest among rural-farm males and highest among urban males. Usually, there was a positive relationship between the unemployment rate in a county and the percentage of the population which was urban. Hence, the unemployment variable may have acted as a proxy for relative urbanization after taking into account the proximity of the county to cities of 50,000 population or more. If this was the case, then the positive effect indicated that the more urban a county, the higher was the rural income level in that county. The nonfarm labor markets of small urban concentrations, therefore, did provide part- or full-time nonfarm alternatives to agricultural employment.

For the South, the situation appeared to be different. The higher the white male unemployment rate in a county, the lower was the rural-farm income level for the white population. Clearly, the small urban centers in the South did not provide attractive nonfarm alternatives to agricultural employment. This result was consistent with the effects of the occupation variables in the South and with the extensive migration from the rural South to the North and West in recent decades.

The average value of farmland and buildings per farm in a county was viewed as a proxy variable for the level of capital assets per farm in local agriculture. Large farms, or high returns to capital in local agriculture, or both, would imply high farm income per farm and hence a high level of income in a county. Thus, it was expected that the higher the average value of farmland and buildings per farm in a county, the higher would be the income level.

This hypothesis was borne out for the Nation as a whole and for each region. However, the average value of farmland and buildings was correlated with the proximity to metropolitan centers in the Northeast, and with the relative prevalence of white farm laborers in the South, the West, and for the Nation as a whole. The relationship between average value and proximity suggests that the value of land was influenced by the proximity to metropolitan centers in the Northeast, a reasonable relationship given the comparative proximity of cities to each other and the extreme size of the metropolitan centers in that region. The relationship between farm laborers and the average value was reasonable, especially in the South and West where hired farm labor was more widespread and occurred on larger farms.

Relative to other variables in the analysis, capital assets per farm, as reflected in the average value of farmland and buildings per farm per county, accounted for only a minor part of the intercommunity differences in income levels. For the Nation, this variable ranked eighth in importance while only in the West did it rank higher than fifth.

Ecological factors. It was expected that the proximity to industrial-urban concentrations would be a major factor in accounting for intercommunity differences in rural-farm income. Transportation and transfer costs alone implied that income levels were positively related to the proximity to large cities, but it was expected that other factors would have similar effects and also that the size of the city would have an effect on income levels.

Costs of market information varied in roughly the same way as transportation costs. So also should the cost of living; the closer to a large city and the larger the city, the higher would be the costs of living. Further, T. W. Schultz hypothesized that the product and factor markets facing agriculture are more efficient, and hence income levels are higher at the center than at the periphery of industrial-urban development matrices.[4] Since the division of labor is limited by the extent of the market, the breadth (the number of occupations represented) and depth (number of jobs per occupation) of local labor markets should be positively related to proximity to metropolitan centers.[5] Given this relationship, rural-farm income levels should be positively related to proximity.[6]

If these hypotheses are correct, then the closer to a large city and the larger the city, the higher would be the rural-farm income level. Further, proximity to the industrial-urban concentrations should be a major factor in determining these income levels.

For the Nation, proximity to metropolitan centers was the second most important factor accounting for intercommunity differences in rural-farm income levels: the farther from a large city, and the smaller the city, the lower the income level. On the average, income level in a county located 50 to 100 miles from a city of 500,000 population was $140 lower than in the county in which the city was located, all other things being equal. The analogous differences in each region were $71 in the Northeast, $100 in the North Central, $167 in the South, and $64 in the West.

These differences were all significantly different from zero and most certainly confirmed the hypothesis that proximity to metropolitan centers accounted for a major portion of the intercommunity differences in rural-farm income levels, both for the Nation as a whole and for each region. The question arose, however, as to whether these differences were larger than could be accounted for by transfer and transportation costs alone. One way to answer this question was to ask what sum invested would yield annually an amount equal to the difference due to proximity. This sum must be greater than reasonable transfer costs if the difference was to be accounted for by more than these costs. At 5-percent interest, $2,800 would yield $140 per year. Hence, at the national level the cost of relocating from a rural-farm residence in a county 50 to 100 miles from a city of 500,000 to a rural-farm residence in the county in which the city was located must average $2,800 if the $140 difference was to be explained by transfer costs alone. The analogous costs for each region were $1,425 in the Northeast, $2,022 in the North Central, $3,338 in the South, and $1,286 in the West. All of these estimates were considerably above reasonable transportation costs over a distance of 50 to 100 miles, even including the cost of transporting considerable personal belongings.[7] Most likely, then, factors in addition to transfer costs are measured by the proximity variable.

Regional differences. Of the five social and demographic characteristics studied, only two (family size and the prevalence of highly educated rural-farm males) had different regional effects (table IX-2). Of the seven economic variables, only two had equal effects on rural-farm income levels in all regions; these were the prevalence of farm laborers and craftsmen. In regard to the ecological variables, there were differences in the effect of proximity to metropolitan centers among regions. Of the three groups, the effects of the social-demographic variables appeared to be the most homogeneous regionally.

One of the major questions asked of the data is answered by these results. Clearly, there were differences among regions in the effects of many of the factors studied on the income level of rural-farm white families. A regional classification, therefore, did contribute to the analysis of intercommunity differences in income levels of this group.

Perhaps the most interesting regional differences are those of the effects of proximity. The impact of proximity was greatest in the South and least in the

Northeast and the West. The fact that, other things equal, proximity had its greatest impact in the South indicated that the spatial pattern of growth had been least uniform in the South. Rural communities removed from the influence of large cities were less developed in the South than elsewhere in the country. Why? Given the mass migration from the rural South to southern, northern, and western cities, one could not argue that transfer or market information costs had acted as constraints to their growth. There was some evidence of job rationing in the labor markets in the South.[8] It appeared most likely, however, that differences in the breadth and depth of the labor market may have accounted for the major portion of the observed differences in the South.

Table IX-2.—SUMMARY OF THE RESULTS OF MULTIPLE COMPARISON TESTS AMONG REGIONS, BY RESIDENCE, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and residence	Independent variable[1]												
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}
RURAL FARM													
Northeast vs. North Central	0	0	0	1	0	1	0	1	0	0	0	0	0
Northeast vs. South	0	0	0	0	0	1	0	0	0	0	1	0	1
Northeast vs. West	0	0	0	0	0	0	0	0	0	0	0	0	0
North Central vs. South	0	0	0	1	0	0	0	1	0	0	1	0	1
North Central vs. West	0	0	0	1	1	0	0	1	0	1	1	1	1
South vs. West	0	0	0	0	1	1	0	1	0	1	1	0	1
RURAL NONFARM													
Northeast vs. North Central	0	1	0	1	0	1	1	1	0	0	1	(2)	1
Northeast vs. South	0	1	0	1	0	1	1	0	0	1	0	(2)	1
Northeast vs. West	0	1	0	1	0	1	1	0	0	0	0	(2)	0
North Central vs. South	0	0	0	0	0	1	1	1	0	1	1	(2)	1
North Central vs. West	0	0	0	1	0	0	0	1	0	0	1	(2)	1
South vs. West	0	0	1	0	1	1	1	1	1	1	1	(2)	1

[1] The independent variables are: X_1 percent of males 15 to 24 years old; X_2 percent of males 25 to 44 years old; X_3 percent of males 25 years old and over with 0 to 6 years of school completed; X_4 percent of males 25 years old and over with 12 years or more of school completed; X_5 average size of family; X_6 percent of male labor force who are farmers and farm managers; X_7 percent of male labor force who are farm laborers and foremen; X_8 percent of male labor force who are operatives and kindred workers; X_9 percent of male labor force who are craftsmen, foremen, and kindred workers; X_{10} percent of females 14 years old and over who are employed; X_{11} percent of male labor force who are unemployed; X_{12} average value of farmland and buildings per farm; X_{13} proximity to standard metropolitan statistical area, and size; "1" denotes that there is a significant difference between the regression coefficients of the independent variable for the two regions compared; "0" denotes that there is no significant difference between the regression coefficients of the two regions compared.

[2] Variable X_{12} was not included in the rural-nonfarm equations.

Source: Retabulated and computed from data in 1960 Census of Population.

One might reasonably expect that similar kinds of jobs in the same proportionate numbers are available in large cities of similar size regardless of location; that a migrant to a large southern or northern city of equivalent size has roughly the same probability of finding the job for which he has comparative advantage. The labor markets in outlying rural communities in the South, however, probably are not as broad in terms of the range of occupations, nor as deep in regard to the number of jobs within each occupation as are labor markets in counties a similar distance from northern cities. In other words, an individual in an outlying southern community has less likelihood of finding a job for which he is best suited than does an individual in an outlying community elsewhere in the United States. This rationalization seems reasonable in light of the mass migration from the rural South in the past few decades.

Another interesting result of the regional comparisons was the significantly negative and different impact of the unemployment rate of white males on rural-farm income levels in the southern counties. In no other region was the the income level a negative function of the unemployment rate. In other words, the relationship in the South was consistent with economic theory but inconsistent in every other region.

These conflicting results may stem from the fact that the variable used was a poor one since it actually measured unemployment in one week in 1960, but was used to estimate the average unemployment rate for the year 1959. If this rationalization is accepted, then the findings on the relationship between income levels and unemployment rates were due to chance and should be disregarded. Two other rationalizations are possible, however, and seem more appealing.

(1) The use of the male unemployment statistic may have accounted for at least part of these puzzling relationships. Farmers and farm managers generally are males, and therefore it is expected that the male unemployment rate would affect them. Originally, it was believed that male unemployment rates would be a good measure of the total labor supply situation, but subsequent analysis suggested that the relationship between male and female unemployment was not close. This was consistent with the finding, reported in chapter VII, that rural-farm males and females who worked in nonfarm industries had very different patterns of employment in most regions. The South, however, appeared to be an exception in that a higher proportion of females were employed in occupations that were competitive with males. Thus, in the South, the male unemployment rate probably represented the general unemployment rate better than it did in other areas.

(2) The reported unemployment rate was a function of the extent of local industrialization in cities of less than 50,000 in population. To the extent this was true, and if male and female employment were largely noncompetitive, then the positive relationship between male unemployment and rural family income in the regions outside of the South was largely the result of increased income due to greater female employment in smaller industrial areas that also had somewhat higher male unemployment. In the South, where there was less differentiation in the labor market, the effect of local industrialization was overridden by the general excess supply of labor in rural areas and the low level of female incomes that, in these areas, was not enough to overcome the effects of the excess labor.

There were several indications that the labor market in the South was different from that in other regions of the country. One difference was the much greater *impact of the proximity variable here than elsewhere. Another was the substan*tial, depressing effect of the predominance of farmers and farm laborers upon rural-farm family income. Still another was the absence of large numbers of craftsmen and operatives in the rural-farm labor force to increase family income; in fact, the relationships were negative and significant.

Thus, in summary, the local unemployment rate seemed to reflect in part the presence of urban areas of less than 50,000 population. In areas in which the male and female labor markets were substantially different, the impact of local unemployment on the earnings of farmers was more than offset by the added income of other family members, so that total family income was positively related to unemployment. In the South, there was less differentiation between the local nonfarm labor markets, for both males and females, so that the effect of unemployment was to reduce total family income as well as the income of farmers and farm managers.

Whatever the reasons, however, it was clear that the consequences of high unemployment rates of white males were very much more severe with respect to the income levels of white rural-farm families in southern communities than elsewhere in the United States. Furthermore, if industrial-urban development is to be encouraged in the South, emphasis should be placed on encouraging the development of industries with stable employment patterns. Otherwise unstable employment patterns may offset any income benefit gained by industrial urbanization.

There were two other factors which clearly revealed interregional differences in their effects on the income level of rural-farm white families. A prevalence of highly educated rural-farm white males and operatives had greater positive effects on the income level of rural-farm white families in North Central communities than elsewhere. The interregional differences in the other factors were less clear-cut.

Intercommunity differences in white rural-nonfarm income levels

A summary of the results of the national and regional analyses of intercommunity differences in white rural-nonfarm income levels is presented in table IX–3. A more complete summary can be found in the appendix.

Social and demographic factors. Variability among counties in the prevalence of poorly educated white rural-nonfarm males accounted for an important portion of intercommunity differences in rural-nonfarm income levels for the Nation as a whole. Indeed, this variable was the most important single variable at the national level. In the average southern county, 30.2 percent of the rural-nonfarm white males 25 years old and over had completed less than 7 years of school. This compared with 11.7 percent in an average Northeastern county, 14.2 percent in an average North Central county, and 12.6 percent in

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an average Western county. Much of the large difference between the rural-nonfarm income levels in southern communities versus those elsewhere can be explained by low educational levels in the South.

Table IX-3.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO INCOME LEVEL OF RURAL-NONFARM WHITE FAMILIES, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

[In beta coefficients]

Selected characteristic	United States	Northeast	North Central	South	West
SOCIAL AND DEMOGRAPHIC					
Age of rural-nonfarm white males:					
Percent 15 to 24 years old	[1]-.1157	-.0597	-.0108	-.0319	.0452
Percent 25 to 44 years old	.0338	[1].9974	[1].0637	-.0181	.0742
Education of rural-nonfarm white males, 25 years old and over:					
Percent with 0 to 6 years of school completed	[1]-.4621	-.0649	.0021	[1].1071	[1]-.1277
Percent with 12 years or more of school completed	.0238	[1]-.8374	[1].1309	[1].0613	-.0678
Average size of rural-nonfarm white family	[1].1120	-.0931	-.0098	.0488	[1]-.2061
ECONOMIC					
Occupation of rural-nonfarm white males:					
Percent farmers and farm managers	[1]-.1363	[1].2381	[1]-.0820	[1]-.3207	[1]-.1048
Percent farm laborers and farm foremen	[1].1125	[1]-.3151	.0488	[1]-.1018	[1].1376
Percent operatives and kindred workers	[1].1080	[1]-.1725	[1].3165	[1]-.0141	.0128
Percent craftsmen, foremen, and kindred workers	[1]-.0773	-.0006	-.0298	[1]-.1158	-.0805
Employment of rural-nonfarm white females	[1].1647	-.1604	.0479	[1].2082	[1].1187
Unemployment rate of white males	[1].1664	-.0120	[1].2029	[1]-.1122	[1].1700
ECOLOGICAL					
Proximity to SMSA and size	[1].3597	.0623	[1].3685	[1].3970	[1].5620
Multiple correlation coefficient	.4935	.4127	.5454	.3515	.4397

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

The effects of education were more erratic at the regional level. In two of the four regions, the results were consistent with expectations. The effects of formal education were more puzzling in the Northeast and the South. Intercorrelation among the independent variables, and especially among the social and demographic variables, was extensive in the Northeast which may account for the paradoxical results. Intercorrelation was not present in the South where one result was as expected and the other one was inconsistent with expectations. In the North Central and Western Regions, the results were consistent with expectations. In the North Central Region, a prevalence of highly educated rural-nonfarm males raised rural-nonfarm income levels, whereas in the West a prevalence of poorly educated rural-nonfarm males depressed income levels.

Age, too, accounted for some of the differences among counties in rural-nonfarm income levels; the more prevalent the 15- to 24-year-old rural-nonfarm males, the lower the income level. The interpretation of this result was clear.

Since young people had little work experience, and since they were relatively unskilled, they commanded lower wage rates than older men. Moreover, younger workers had much higher unemployment rates than older workers, which would lower their annual incomes regardless of their average annual wage rates.

Again, the results of the age variables differed by region. Because the prevalence of rural-nonfarm males aged 25 to 44 years was correlated with many other variables in the Northeast, it assumed the most important position among the variables. Essentially it showed the combined effects of age 45 years and over, high education levels, employed females, and craftsmen. A more adequate interpretation of the results for the intercorrelated variables in the Northeast would be: that a higher income level would result from a prevalence of rural-nonfarm males aged 25 to 44, highly educated and employed as craftsmen, and a prevalence of employed rural-nonfarm females. In the South and West, age appeared to have little or no effect on income levels. In the North Central Region, a prevailing number of rural-nonfarm males aged 25 to 44 years had a modest, positive effect on income levels.

For the Nation the larger the average family size, the higher was the income level. This was consistent with the view that the number of employed persons, and hence total income, increased as family size increased. In the regional analyses, this variable had a significant effect only in the West where its effect on the rural-nonfarm income level was negative and important.

Economic factors. The effects of all of the local economic factors at the national level were significantly different from zero; three of them were inconsistent with expectations. As was expected, the more prevalent operatives and employed females, and the less numerous farmers, the higher were rural-nonfarm income levels. The more prevalent farm laborers and the less prevalent craftsmen, however, the higher was the income level. Nevertheless, the net effect of reducing employment in agriculture (farmers and farm laborers) and increasing employment in operative and craftsman occupations would be to increase the income level.

As in the analysis at the national level, rural-nonfarm income levels by counties were positively related to the male unemployment rate. Again, it is probable that the unemployment rate is a better measure of the presence of urban concentrations of less than 50,000 population than it is of average annual unemployment.

At the regional level, the effects of the occupational variables on rural-nonfarm income levels were surprisingly consistent with expectations. Not much can be said of the results for the Northeast, because of the extensive intercorrelation among the independent variables, but in the other three regions the interpretation appeared to be clear. In the North Central Region, the fewer farmers and the more operatives in the male rural-nonfarm labor force of a county, the higher was the income level. These relationships partly accounted for the lower average income levels in the West North Central Division compared with those in the East North Central Division. In the male rural-nonfarm labor force in the average county, 3.2 percent were farmers and 27 percent were operatives in the East North Central Division, whereas 9.0 percent were farmers and 17.8 percent were operatives in the West North Central Division. All four occupational variables had negative effects on income levels. But a prevalence of rural-nonfarm males in the two agricultural categories decreased the income level more than a comparatively large number in operative and craftsmen occupations.

The relationships were slightly different in the South. The effect of each of the four occupational variables was to depress the rural-nonfarm income level in comparison with the occupations not studied. However, a prevalence of farmers depressed the income level more than did a similar proportion of any of the other three occupations. Nevertheless, operative and craftsmen occupations did not appear to be very attractive nonfarm employment alternatives for males engaged in agricultural employment. This was consistent with the results in the South, and with the view that migration from the South in recent decades was occasioned at least partly by the lack of attractive nonfarm employment alternatives in the area.

In the West, the occupational variables had little effect on rural-nonfarm income levels. A prevalence of farmers depressed, whereas a like percentage of farm laborers increased, the income level. A prevalence of rural-nonfarm laborers may have indicated a county with farms that were larger and more profitable than the average. Either higher farm labor wage rates, or the effects of the larger-than-average business generated by the large farms, may have resulted in higher income levels.

In sum, local economic factors were relatively important in explaining intercommunity differences in rural-nonfarm income levels, both for the Nation as a whole and for each region. In general, agricultural employment depressed, whereas nonfarm employment increased income levels. Employed females added significantly to the income levels, especially in the South where income levels decreased as unemployment rose. In other regions, and for the country as a whole, the male unemployment rate may have been an indicator of urban concentration smaller than metropolitan size.

Ecological factors. The proximity variable was included in the rural-nonfarm equation for reasons similar to those discussed in the rural-farm analysis. Transportation, transfer, and market information costs, as well as cost of living differences and locational differences in market efficiency, and the breadth and depth of labor markets, were all postulated to affect rural-nonfarm income levels in such a way that communities near large cities would have higher levels than would communities farther removed.

At the national level, and for each region, with the exception of the Northeast, this hypothesis was confirmed by the results. As a national average, the rural-nonfarm income level in a county 50 to 100 miles from a city of 500,000 was about $160 lower than the income level in the county in which the city was located. Similar average differences by region were as follows: $132 in the North Central Region, $182 for the South, and $47 for the West. Proximity to metropolitan centers accounted for none of the intercommunity income differences in the Northeast.[*]

Once more the question arises as to whether these differences were greater than could be explained solely by transfer costs. At an interest rate of 5 percent, the present value of an annual income stream of $160 is approximately $3,200. Thus, as a national average, if transfer costs were greater than $3,200, it would not profit a rural-nonfarm family to move from a county 50 to 100 miles from a city of 50,000 to a rural-nonfarm residence in the county in which the city was located. The present values of income streams equal to the average regional differences were $2,632 in the North Central Region, $3,632 in the South, and $945 in the West. Since the difference was not significantly different from zero in the Northeast, its present value was not computed. Once again, these differences were apparently larger than can be explained by average transfer costs.

Regional differences. As with the rural-farm analysis, the regional effects of each variable were compared (table IX-2).

Of the five social and demographic variables, all but X_1 (ages 15 to 24) had effects which differed by region. The effects of X_2 (ages 25 to 44) and X_4 (high education levels) in the Northeast were different from their effects elsewhere, a fact that most likely can be attributed to the extensive intercorrelation among the variables in that region. With respect to other regional differences of social and demographic factors, only the difference between the North Central and the West in the effects of a prevalence of highly educated rural-nonfarm males appeared to be economically significant. The West grew more rapidly in the past decade than the North Central Region and encountered a net inmigration. Because of this rapid growth, the demand for labor in western labor markets may have been such that job discrimination based on educational qualification was less than in North Central markets. Hence the influence of the education factor should be less in the West.

All of the seven local economic factors had regional differences in their effects on rural-nonfarm income levels. In general, a prevalence of rural-nonfarm males employed in the four occupations studied depressed income levels most in southern counties and least in northeastern counties. In the South, agricultural employment had the most severe effect in depressing the income level.

As in the rural-farm analysis, the effect of the male unemployment rate was negative in the South and positive elsewhere. The difference between the male and female labor markets in the South and the fact that in the other regions the male unemployment rate probably measures urbanity are the reasons postulated for this regional difference.[10]

Local labor markets have much different effects on rural-nonfarm income levels in the South than elsewhere. This was indicated by the significantly depressing effects of the four occupational variables, the negative effect of the male unemployment rate, and the significantly greater impact in the South of a prevalence of employed females.

The conclusions to be drawn from the comparison of the regional effects of proximity on rural-nonfarm income levels were similar to those drawn from the rural-farm analysis, but possibly they were clearer. The effects of proximity were greatest in the South, second in the North Central, and least in the West and the Northeast. Clearly, the income-increasing effects of industrial urbanization would be felt most in the South and the North Central Regions.

Intercommunity differences in nonwhite income levels in the South

Intercommunity differences in income levels of the nonwhite population were analyzed only for the South, because it contained most of the Nation's rural-farm and rural-nonfarm nonwhite residents. A summary of these differences is presented in table IX–4 and more complete results are shown in the appendix table A–22.

Rural-farm income levels

Social and demographic factors. Of the social and demographic characteristics analyzed, only a prevalence of rural-farm nonwhite males, aged 25 to 44, had any effect on income levels of rural-farm nonwhite residents. This was consistent with the view that a predominance of males in their highest earning years had a positive effect on income levels. That education appeared to have no effect on income levels may indicate that educational wage differentials were lower for nonwhites, and this was consistent with the view that the value of education was lower for the nonwhite than for the white persons.

Economic factors. The effects on income levels of rural-farm nonwhite employment in the occupations studied were negative or zero. Further, a predominance of agricultural employment, as opposed to other employment, depressed the income level. High unemployment rates for nonwhite males had no effect on income levels, and a prevalence of employed rural-farm nonwhite females increased income levels modestly. In total, local economic factors contributed little positively to the income level of nonwhite rural-farm families. That the unemployment rate had no effect whatsoever was interesting. In the analyses of white income levels, rural income was related to the unemployment rate for white males, either positively or negatively. In either case, rural whites were affected by the overall conditions in the local labor market. This did not appear to be the case for rural-farm nonwhites, who seemed to be somewhat removed from local labor market conditions. This may have been due to the high proportion of nonwhites in purely agricultural employment.

Also interesting was the very important negative effect of the average value of farmland and buildings. This was inconsistent with expectations but may be rationalized. There was probably a negative correlation between the average value of farmland and buildings per farm in a county and nonwhite ownership of the land in southern counties. Thus, even though the size of farm was small, nonwhite farmers may have obtained returns to capital and land (admittedly small), plus labor returns, sufficient to raise the nonwhite rural-farm income level above that in counties in which there were larger farms and fewer Negro owner-operators.

In summary, neither agricultural employment nor employment in the skilled labor market appeared particularly promising for the rural-farm nonwhite males.

Ecological factors. The second most important effect on income was the proximity to metropolitan centers. On the average the income level of rural-farm nonwhite families in a county 50 to 100 miles from a city of 500,000 was about

Table IX-4.—RELATIONSHIP OF SELECTED CHARACTERISTICS TO INCOME LEVEL OF RURAL-FARM AND RURAL-NONFARM NONWHITE FAMILIES IN THE SOUTH: 1960

[In beta coefficients]

Selected characteristic	Residence	
	Rural farm	Rural nonfarm
SOCIAL AND DEMOGRAPHIC		
Age of rural-nonfarm nonwhite males:		
Percent 15 to 24 years old	-.0127	.0229
Percent 25 to 44 years old	[1].1674	[1].0750
Education of rural-nonfarm nonwhite males, 25 years old and over:		
Percent with 0 to 6 years of school completed	.0174	[1].0516
Percent with 12 years or more of school completed	.0005	.0083
Average size of rural-nonfarm nonwhite family	-.0120	.0284
ECONOMIC		
Occupation of rural-nonfarm nonwhite males:		
Percent farmers and farm managers	[1]-.1725	[1]-.0864
Percent farm laborers and farm foremen	[1]-.0641	[1]-.1583
Percent operatives and kindred workers	[1]-.0655	-.0067
Percent craftsmen, foremen, and kindred workers	-.4712	[1]-.0679
Employment of rural-nonfarm nonwhite females	[1].0847	[1].0934
Unemployment rate of nonwhite males	-.0008	[1].2678
Average value of farmland and buildings	[1]-2.1837	([2])
ECOLOGICAL		
Proximity to SMSA and size	[1].4373	[1].4144
Multiple correlation coefficient	.3246	.3691

[1] The regression coefficient was significantly different from zero at the .05 level.

[2] Variable X_{13} was not included in the rural-nonfarm equation.

Source: Retabulated and computed from data in 1960 Census of Population.

$104 lower than in the county in which the city was located. This difference was more than can reasonably be accounted for by transfer costs. With the effects of local economic or social and demographic factors, slight or nonexistent, it seemed clear that local industrial urbanization was crucial if the income level was to be raised. Alternatively, these results were consistent with the heavy migration of nonwhites from the rural South to Southern and Northern cities in the past two decades.

Rural-nonfarm income levels

Intercommunity differences in income levels of rural-nonfarm nonwhites were very similar to those discussed immediately above. Many of the same conclusions may be drawn and, therefore, the results need not be discussed in great detail.

The effect of the unemployment rate was the only major difference between the results of the two analyses. The effect of the unemployment rate of nonwhite males on the income levels of rural-nonfarm nonwhites was significantly different from zero and positive. This was similar to the results of analyses of the income levels of whites other than those in the South and probably can be interpreted in a similar fashion. In the South, the employment rate was probably an index of urbanity, and as such would have a positive effect on income levels. Further, it indicated that, in contrast with rural-farm nonwhites, the rural-nonfarm nonwhites were affected by overall local labor market conditions.

In summary, proximity to metropolitan centers, that is closeness to industrial urban development, appeared to be the most important factor affecting intercommunity differences in rural nonwhite income levels. Neither social and demographic factors nor local economic conditions seemed to be important. For rural-farm nonwhites, land ownership appeared to be important.

Rural-farm—rural-nonfarm comparisons

In addition to the analyses of factors affecting the income levels of rural-farm and rural-nonfarm families, an additional set of questions was asked: Do the factors which affect the income level of rural-farm families in a county affect similarly the income level of rural-nonfarm families in the same county? For instance, does the prevalence of functional illiteracy among rural-farm males in a county have the same effect on the income level of rural-farm families as the prevalence of functional illiteracy among rural-nonfarm males on the income level of rural-nonfarm families?

Questions of this type are important for at least two reasons. The first reason concerns meaningful classification. The Bureau of the Census classifies persons in rural areas as rural-farm or rural-nonfarm. Presumably, with respect to a large number of important characteristics, this classification is meaningful in the sense that there are differences between the two groups of persons. It is relevant to question, then, whether rural-farm families and rural-nonfarm families are different with respect to the effects of various factors on their respective income levels. If these factors affect the income level of the two groups in a rural community differently then, at least with respect to these factors, a rural-farm—rural-nonfarm classification is meaningful.

The question is also relevant for policy purposes. Some of the factors which have been studied are amenable to change, at least in the long run. It is important to know what effects changes in education, for instance, would have on the income levels of rural-farm and rural-nonfarm families. If the effects are the same, then policy formulation is easier for it can proceed without having to consider the differential effects changes in education might have on different kinds of rural families.

Social and demographic factors. At the national level, the effects of three of the five social and demographic factors differed between residential groups (table IX-5). A prevalence of young males depressed the rural-nonfarm income level but had no effect on the rural-farm income level. A relatively large proportion of functional illiterates depressed rural-nonfarm income levels more than for rural-farm residents. And, average family size had a greater positive effect on rural-farm than on rural-nonfarm income levels.

Table IX-5.—SUMMARY OF THE RESULTS OF MULTIPLE COMPARISON TESTS AMONG RESIDENTIAL SECTORS, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region and residence	Independent variable[1]												
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}
United States													
Rural farm vs. rural nonfarm...	1	0	1	0	1	1	0	1	1	1	0	([2])	1
Northeast													
Rural farm vs. rural nonfarm...	0	1	0	1	0	1	1	0	0	0	1	([2])	0
North Central													
Rural farm vs. rural nonfarm...	0	0	0	0	1	0	0	0	0	0	0	([2])	1
South - White													
Rural farm vs. rural nonfarm...	1	0	1	0	0	1	0	0	0	1	0	([2])	0
South - Nonwhite													
Rural farm vs. rural nonfarm...	0	0	0	0	0	0	1	0	0	0	1	([2])	0
West													
Rural farm vs. rural nonfarm...	0	0	0	0	0	0	0	0	0	1	0	([2])	1

[1] The independent variables are: X_1 percent of males 15 to 24 years old; X_2 percent of males 25 to 44 years old; X_3 percent of males 25 years old and over with 0 to 6 years of school completed; X_4 percent of males age 25 years old and over with 12 years or more of school completed; X_5 average size of family; X_6 percent of male labor force who are farmers and farm managers; X_7 percent of male labor force who are farm laborers; X_8 percent of male labor force who are operatives; X_9 percent of male labor force who are craftsmen; X_{10} percent of females 14 years old and over who are employed; X_{11} percent of male labor force in county who are unemployed; X_{13} proximity to metropolitan centers; "1" denotes that there is a significant difference between the regression coefficients of the independent variables for the two residential categories compared; "0" denotes that there is no significant difference between the regression coefficients of the two residential categories compared.

[2] Variable X_{12} was included in the rural-farm equations but not included in the rural-nonfarm equations.

Source: Retabulated and computed from data in 1960 Census of Population.

All three differences were consistent with what one would expect. Returns to unpaid family labor were an important income source to farm families. This would explain the greater impact of family size on rural-farm income levels and the fact that the young did not depress income of rural-farm families. However, a prevalence of the young did depress income levels of rural-nonfarm families, due to the fact that young males were in the labor force and had higher rates of unemployment and lower wage rates than older workers. The 15- to 24-year-old rural-farm male had either left home or was employed on the farm.

On the whole, there were fewer differences among residence groups in the effects of the social and demographic factors at the regional level. The differences for the Northeast may be explained by the extensive intercorrelation among the rural-nonfarm variables. In the North Central Region, age and education levels had similar effects, but average size of family had a differential effect. While its effect on rural-farm income levels was positive, it had no effect on rural-nonfarm income levels. This difference was consistent with expectations. In the white South a prevalence of males, aged 45 and over, had a depressing effect on rural-farm income levels, but no effect on the income levels of the rural-nonfarm group. Because of the predominance of agricultural employment among rural-farm males, and the importance of hand labor in the South, physical productivity, as indicated by age, may be more important as a determinant of rural-farm income levels. Social and demographic factors had no differential effects either in the nonwhite South or in the West.

Economic factors. The effects of four of the seven local economic factors differed between residential groups at the national level. Of the four occupation variables, the presence of farmers, operatives, and craftsmen had greater impact on rural-nonfarm than on rural-farm income levels, whereas there was no difference in the impact of a relative prevalence of farm laborers. A prevalence of employed females affected rural-nonfarm income levels more than those of the rural-farm groups. And the male unemployment rate equally affected the income levels of the two residential categories.

These findings suggest that rural-nonfarm income levels were more sensitive to changes in local labor market conditions than those of the rural-farm population. One reason may be that more rural-farm families were employed in agriculture, and were therefore somewhat removed from intercommunity variations in the occupational structure and the labor force participation rate of females.

Within each region, the effects due to local economic factors were more homogeneous. Again, some of the differences in the effects in the Northeast probably can be attributed to the intercorrelation among the rural-nonfarm variables. The four occupational variables had effects in this region similar to those for the Nation as a whole. One might interpret the greater positive impact of the unemployment rate on rural-farm income levels in the Northeast as an indication that local urbanity affects the income levels of the rural-farm residence group more than those of the rural-nonfarm group. Presumably, the presence of cities of less than 50,000 population provided more opportunity for part-time employment and more full-time nonfarm job alternatives for farmers. There were no differences in the effects of economic factors on income levels of the two residence categories in the North Central Region.

Economic factors had different effects on both white and nonwhite income levels for both residential groups in the South. The prevalence of white farmers and white employed females had larger effects on the income levels of rural-nonfarm whites. Similarly, the nonwhite unemployment rate and nonwhite farm laborer variables had greater impacts on the income levels of rural-nonfarm nonwhites. Findings on the impact of the unemployment rate indicate that the income levels of rural-nonfarm nonwhites are more sensitive to labor markets in cities of less than 50,000 than were those of rural-farm nonwhites.

In the West, the economic variables generally had no greater impact on income levels for the rural-nonfarm than for the rural-farm residents. Of all the economic factors, only the employment of females had a greater impact on the rural-nonfarm than on the rural-farm group.

In general, income levels for the rural-nonfarm population appeared to be more sensitive to changes in local labor market conditions than those for the rural-farm residents. This appeared to be especially true in the Northeast and the South but less pronounced in the North Central Region and the West.

Ecological factors. Proximity to metropolitan centers had a slightly greater impact on rural-nonfarm than on rural-farm income levels for the Nation as a whole. Inasmuch as more rural-nonfarm residents were employed in occupations other than farming, this result was reasonable. Industrial-urban concentration and growth affected farmers only indirectly by increasing part- and full-time nonfarm employment opportunities and lowering transportation costs slightly.

The effect of proximity in the North Central Region was consistent with that for the Nation as a whole, while in the West it was greatest for the rural-farm income group. In the South, proximity appeared to have similar effects on rural-farm and rural-nonfarm income levels. However, in the Northeast, the statistical results of proximity were uncertain.

Summary and conclusions

This chapter has summarized the results of a number of regression analyses which were carried out to determine the relationship between intercommunity income differences observed in census data and the social and demographic characteristics of the local populations, local economic conditions, and proximity to industrial-urban concentrations. Separate analyses were run at the national, regional, and divisional level for each residence component of the population,

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using each of the three measures of proximity to metropolitan centers. The results indicated that in a majority of the cases, the size-distance ₁ measure was the most useful one and the results using this measure of proximity have been reported throughout. The analyses of the urban components of the population were not reported here because they did not meet publication standards. The high intercorrelation between population characteristics, occupational structure, and proximity made the results inconclusive at best.

In general, it was apparent that the variables included in the analysis to represent social and demographic characteristics, labor market characteristics, and proximity to urban areas were significant influences in determining the intercommunity income differentials observed in rural America. For the Nation as a whole, the most important factor explaining intercommunity income differences was the proportion of males with less than 7 years of formal education. Although its relative importance was less at the regional level, this characteristic of the population remained an important determinant of income within the smaller geographical areas. The age structure of the population had inconclusive or varying effects, as did the occupational structure. The impact of the occupational structure upon community income seemingly varied substantially by geographic area, with no consistent pattern evident.

One of the more puzzling aspects of the analyses was the consistently positive relationship between income and the local unemployment rate in all situations outside of the South. It seemed that there was a strong relationship between the existence of nonfarm employment and reported unemployment. In other words, unemployment was an urban phenomenon, for in rural areas, the problem was manifested by the underemployment of rural family members. Outside of the South, it appeared that local urbanization increased family income sufficiently to offset the depressing effect of local male unemployment on rural income. However, in the South, the local labor markets were such that unemployment resulted in lower family income.

The effect of metropolitan proximity on income was as postulated, and city size as well as distance appeared to be of importance. The proximity factor was generally of greater relative importance in the regional analyses than in the national. It turned out at the national level that the importance of proximity in relation to income was greater for rural-nonfarm residents than for farm people. This was, of course, not unexpected inasmuch as the farm population, as now defined, had relatively fewer persons dependent upon nonagricultural employment.

The comparisons among regions suggested that there were significant differences in the way in which various factors affected income. The effects of population characteristics seemed relatively consistent from region to region. Substantial differences appeared among the regions, relating the effect on income of occupation and labor market structure. This was true also for the effect o the proximity variable. Where differences occurred, they usually were those tha differentiated the South from some or all of the other regions. For instance, the effect of proximity upon rural income clearly was greater in the South than in other regions. Thus, the validity of continuing regional and divisional classifications of census data appeared to be substantiated. Indeed, although not reported here, there were indications in the divisional analyses that the West North Central, West South Central, and Mountain Divisions had much in common, insofar as economic variables were concerned. Consideration might well be given to combining these divisions into a new region.

Comparisons between the rural-farm and rural-nonfarm analyses suggested that the impact of the factors determining income differences varied between the two residence groups. Homogeneity appeared greatest in this regard among rural nonwhite residents in the South. While there were important differences among the groups in some regions, insofar as the effect that population characteristics, labor force characteristics, and proximity to urban areas had upon family income, these differences were less a significant factor at the regional than at the national level.

The results of this analysis suggest that census data can provide a meaningful source of data for aggregate income analysis. The storage of the data on tape makes machine analysis feasible. This preliminary research suggests that substantially greater analysis is warranted, and furthermore, that future censuses should give special attention to the method of coding for research as well as to the compilation of data.

NOTES

[1] For detailed results for the nonfarm sector see W. Keith Bryant, "An Analysis of Intercommunity Income Differentials in Agriculture in the United States." Unpublished Ph. D. dissertation (Michigan State University, 1963).

[2] See appendix for the details of the statistical test.

[3] The equation is set up so that the regression coefficient shows the effect of a change in the percentage of males aged 15 to 24 relative to males 45 and over, holding other variables in the equation constant including the percentage of males, aged 25 to 44. Intercorrelation among the independent variables, and especially those of age, will blur this relationship somewhat. Similar comments can be made about the education and occupation variables. Intercorrelation did not, in general, pose problems in the rural-farm and rural-nonfarm analyses. However, intercorrelation in the urban analyses did pose severe problems and for this reason the results were deemed of marginal value. Hence, the results of the urban analyses are not presented and discussed.

[4] T. W. Schultz, *The Economic Organization of Agriculture* (New York: McGraw-Hill Book Company, Inc. 1953), chapters 9 and 10.

[5] By breadth of the labor market is meant the number of occupations represented and by depth of the labor market, the number of jobs per occupation.

NOTES—Continued

[6] Labor will be more likely to find employment for which it has greatest comparative advantage in a labor market in which the division of labor is extreme than in a labor market which has less breadth and depth. Therefore, individual incomes and hence the income level will be highest in the county with the greatest division of labor.

[7] J. G. Maddox, "Private and Social Costs of the Movement of People Out of Agriculture," *American Economic Review*, vol. 50 (May 1960), p. 392.

[8] W. H. Nichols, "Industrialization, Factor Markets, and Agricultural Development," *Journal of Political Economy*, vol. 64, No. 4 (August 1961), pp. 319–340.

[9] As was explained in chapter I the proximity variable is a joint function of the distance of the county from the city and the population size of neighboring cities. Distance from nearest SMSA was used in place of the proximity variable in each of the equations as an alternative measure of ecological factors. In the Northeast the rural-nonfarm income level in a county *was* negatively related to the distance of the county from the nearest SMSA. Since the results using the proximity variable were better in most equations, the results using proximity are discussed.

[10] See the discussion of the regional differences for the rural-farm analysis.

CHAPTER X

SUMMARY AND IMPLICATIONS

The focus of this monograph has been the rural population of a dominantly urban industrialized society. Metropolitan influence over the rural population is an important and recurring thread throughout. In addition to an interest in the social and economic characteristics of the rural population, the purposes of the monograph are methodological and evaluative. Many of the substantive and analytical portions of the monograph were included for the purpose of assisting in evaluating the utility and relevance of the rural-farm and rural-nonfarm residence categories. A major part of this chapter attempts to confront some of the questions raised by these considerations. How homogeneous are the populations that are now isolated by the application of existing definitions of rural-farm and rural-nonfarm residence? How do the characteristics of these populations differ from those of the urban population? To what extent do the rural population aggregates display identifiable patterns in each region or division, and what effect does distance from a standard metropolitan statistical area have on these patterns? Finally, what kind of a case can be made for the retention of current definitions of the populations according to residence?

Profile of the rural populations

The rural-farm population. The rural-farm population of the conterminous United States in 1960 numbered 13.4 million, or 7.5 percent of the national total. Approximately three-fourths of the Nation's farm population resided in four divisions—the East and West North Central States, the South Atlantic, and East South Central States. Between 2.0 and 2.8 million farm people reside in each of these divisions. Only in the West North Central and East South Central Divisions did this residence category include more than 1 in 6 of the total population. In all other divisions, the rural-farm fraction of the total population was never more than 1 in 10. Despite rapid rates of migration from farm areas, rural-farm nonwhites in 1960 numbered more than 1½ million, or nearly 12 percent of the farm population. A large part of the farm population of America was found to live near metropolitan areas, more than one-third within 50 miles of a standard metropolitan statistical area, and less than one-fifth 100 miles or more from a standard metropolitan statistical area.

The age composition of the rural-farm population generally showed high proportions of young and old and low proportions of persons in the young adult ages. Notably, however, the proportions of persons under 5 years old in the farm population in 1960 were low in relation to other residence groups, especially among whites. Youth dependency loads in the rural-farm population were great in relation to those in the urban population. Among whites, youth dependency ratios in the rural-farm population were generally below those in the rural-nonfarm population. Aged dependency ratios were generally higher in the rural-farm population than in the other residence categories, especially for whites. Sex ratios in the rural-farm population were characteristically higher than those in the remaining residence groups.

When classified by occupation, rural-farm males were often employed outside of those occupational groups most clearly identified as agricultural. Even so, approximately two-thirds of employed white males and about three-fourths of employed nonwhite males in the rural-farm population were farmers and farm managers or farm laborers and foremen. About 10 percent of the males were employed as operatives and kindred workers. The occupational patterns of rural-farm white males were closely related to proximity to metropolitan areas, and this relationship was much stronger than for any other residence group. Among employed females in rural-farm areas, less than one-fourth of the white women and about two-fifths of the nonwhite women were employed as farmers and farm managers or as farm laborers and foremen. Exclusive of these generic agricultural occupations, the white women were most frequently employed as clerical and kindred workers, and as professional, technical, and kindred workers. The nonwhite women were most frequently employed as private household workers. Unlike males, the occupational pattern of rural-farm females was not strongly associated with proximity to urban areas.

All measures of income show rural-farm residents to be disadvantaged relative to urban and rural-nonfarm groups. The median income of white urban families in 1960 was 85 percent above the median income of $3,471 for rural-farm white families. The median income of $1,253 for rural-farm nonwhite families not only was significantly lower than for rural-farm white families but also the ratio of urban to rural-farm income was higher than in the case of white families. In regard to the income for both white and nonwhite families, the disparities between geographic divisions were much greater for rural-farm than for other residence categories.

The analysis of factors associated with income differences among rural communities suggests that significant variations arise because of differing population characteritics, occupational composition, labor market structure, and proximity to large urban areas. The educational level of males was a highly important factor in explaining income differences among both rural-farm and rural-nonfarm communities. While proximity to metropolitan areas was consistently related to income differences, it did not account for significant variations. The analysis of intercommunity income differences clearly indicated that the economic relationships in the South were different from those in the other regions. The relative importance of proximity to metropolitan areas was much greater in the South than elsewhere, suggesting that local labor markets in the rural South were still isolated from their urban counterparts.

In general, the effect of proximity upon family income was greater for rural-nonfarm than for rural-farm families. This was to be expected for there were indications that proximity to metropolitan areas did not appreciably affect the earnings of farmers and farm managers. Proximity to metropolitan areas brought about changes in the occupational patterns of rural people, thereby raising income levels. The relative level of earnings among occupations however was not appreciably altered by locations in relation to large centers.

The level of educational attainment of adults in rural-farm areas in 1960 was markedly lower than for adults in other residence categories. Some, but not all, of this difference was due to the large proportion of rural-farm residents in the upper age brackets. In fact, the age-specific educational levels indicated that the gap between the rural and urban groups is closing with the present generation of school-age children. The school enrollment rates of rural-farm youth in 1960 were generally above those of rural-nonfarm youth. While the proportions of rural-farm youth enrolled usually lagged behind those of the urban group, the differences were not often pronounced.

The level of fertility of the rural-farm population in 1960 was distinctly higher than for the urban population. Ratios of children ever born per 1,000 ever-married rural-farm white women ranged from about one-fifth to one-third higher than those for urban white women. Not only were these ratios for rural-farm nonwhite women substantially higher than for the white women, but the farm-versus-urban differential among nonwhites was even greater than among whites.

The analysis of factors associated with fertility differentials indicated that rural-farm and rural-nonfarm families had much in common regarding their response to social, economic, and ecological factors. Education, income, and proximity to metropolitan areas were important factors associated with rural fertility levels. The same factors were also associated with differences in urban fertility levels. Thus, while the characteristics of the rural-farm population differed appreciably in some instances from those of the urban population, it appeared that the major influences of a given characteristic were similar for the different residence components.

The rural-nonfarm population. The rural-nonfarm population of the conterminous United States in 1960 numbered 40.3 million, or 22.6 percent of the national total. Numerically, rural-nonfarm persons were most important in the South Atlantic, East North Central, and Middle Atlantic Divisions. Rural-nonfarm residents in these three divisions accounted for more than one-half of the rural-nonfarm population. Each of the other divisions, except the Mountain States contained more than 2.2 million rural-nonfarm residents. This residence category accounted for slightly more than one-third of the total population of only two divisions—the South Atlantic and the East South Central. At the other extreme, rural-nonfarm residents comprised approximately one-sixth of the total population of the Middle Atlantic and Pacific Divisions. Nonwhite residents in this group, primarily located in the South, numbered 3.9 million, or 9.7 percent of the total rural-nonfarm population.

More than half of all rural-nonfarm residents in the conterminous United States in 1960 lived within 50 miles of an SMSA. In fact, approximately one-third of the total population in this group resided within SMSA counties, and only slightly more than 12 percent was located 100 miles or more from an SMSA.

Since the rural-nonfarm population is a residential residual, it is not surprising that large variations exist with respect to its age composition. The age structure of this group was often intermediate between that of the rural-farm and urban populations. However, it contained very large percentages under 5 years of age, and, with certain regional exceptions, very low proportions of persons 45 years old and over. Youth dependency loads for the white population were generally highest among those in this group. However, for the nonwhite population, youth dependency loads were higher for those with rural-farm rather than with rural-nonfarm residence. Aged dependency ratios for whites in rural-nonfarm areas usually were intermediate, but for nonwhites they were highest for the rural-nonfarm category. Sex ratios for the rural-nonfarm population are relatively high. However, for nonwhites, the sex ratio is higher for those with rural-nonfarm than with rural-farm residence.

Except for nonwhites, the occupations of rural-nonfarm people were primarily nonagricultural. Only slightly more than 7 percent of employed rural-nonfarm white males were employed as farmers and farm managers or as farm laborers and foremen. Among the nonwhite males, however, more than one-fourth were employed in these agricultural occupations. Generally, the males were employed as operatives and kindred workers, occupations accounting for between one-fourth and one-fifth of the total for rural-nonfarm males. Among employed females classed as rural-nonfarm, only slightly more than 1 percent of white women were employed in agricultural occupations, as compared with more than 10 percent of nonwhite women. Rural-nonfarm white women were most commonly employed as clerical and kindred workers, as service workers, as professional, technical, and kindred workers, and as operatives in nondurable manufacturing. Nonwhite women were employed predominantly as private household and service workers.

The income of rural-nonfarm residents, generally intermediate among the residence groups, was closer to the urban than the rural-farm income levels. Outside of the South, most of the income disparities between the urban and rural-nonfarm groups were due to differences in occupational structure rather than to great differences in earnings within a given occupation. The median urban white family income was 29 percent above that for rural-nonfarm white families, while the median for rural-nonfarm white families was 43 percent above that for rural-farm white families. These disparities were in the same direction but were intensified for nonwhite families.

The level of educational attainment for persons 25 years old and over and residing in rural-nonfarm areas in 1960 was generally higher than for those in rural-farm areas but lower than for urban adults. In regard to school enrollment by youth of various ages, the rural-nonfarm category generally lagged behind the other residence groups. However, the differences between the two rural categories were not great.

Fertility levels for the rural-nonfarm group were generally high. As measured by the number of children ever born per 1,000 married women, these levels more nearly approximated those of rural-farm than of the urban category.

Relative dispersion evidenced by the two rural residence categories

This section seeks to summarize evidence regarding the distinctive attributes of the two rural residence categories, such as ways in which these populations differ from the urban population and the extent to which these attributes exhibit internal variation.

Age composition. The characteristic age pattern of the rural-farm population is one of high proportions of youth and older persons and low proportions in the economically productive ages. A comparable characterization was more difficult to make for the rural-nonfarm population, although its age characteristics were often intermediate in relation to the urban and farm categories.

Based upon the age-color-residence groupings by divisions, age variations were generally not as great for the rural-farm as they were for the rural-nonfarm category, but they were slightly greater for the rural-farm than for the urban population. Among divisions, the coefficient of variation for the proportions of rural-farm whites under 5 years of age and 20 to 24 years of age were greater than for other residence groups. The coefficients for the percentage of rural-nonfarm whites aged 15 to 19, 25 to 44, and 65 and over were greater than comparable ones for rural-farm or urban groups. The coefficients of variation for the percentage of urban whites in the ages 5 to 14 and 45 to 64 exceeded those for other residence groups.

In the rural-farm white population, four age groups in particular exhibited relatively large ranges. For children under 5 and for youth 5 to 14 years of age, the proportions were exceptionally high in the Mountain States and exceptionally low in the South Atlantic States. Proportions of rural-farm white persons aged 45 to 64 were exceptionally high in the West South Central States and exceptionally low in the Mountain States. Finally, the rural-farm white population of New England contained very large proportions aged 65 and over, while that of the Mountain States had very small proportions.

Two age groups in the rural-nonfarm white population—25 to 44 and 65 and over—exhibited large ranges. Percentages of the aged 25-to-44 group were especially high in the Middle Atlantic States and especially low in the West North Central States. Proportions aged 65 and over ranged from a high of 14.0 percent in the West North Central States to a low of 7.2 percent in the South Atlantic States.

Except at the ages starting at 25, there was relatively slight variation for the nonwhite population in rural-farm and rural-nonfarm areas of the three southern divisions. In both of these residence groups, proportions of nonwhites 25 to 44 were much greater in the South Atlantic than in either of the other southern divisions. On the other hand, proportions of older nonwhites (45 to 64 and 65 and over) were much smaller in the South Atlantic than in the remaining southern divisions.

In general, the coefficient of variation for age groups of the rural-farm white population, by distance from an SMSA, was greater than for the other two residence groups of whites. Relative variation by distance was distinctly greatest for the rural-farm white population under 5, 5 to 14, and 65 and over. It was greatest in the rural-nonfarm white population aged 25 to 44. Thus, it would appear that the impact of distance from metropolitan areas upon the age structure of the rural-farm white population is greatest at ages under 15 and 65 and over, and tended to be relatively uniform at all ages between 15 and 65. In the white rural-nonfarm population, on the other hand, relatively large variations in relation to distance were shown only for age groups 25 to 44 and 65 and over.

Sex composition. Variations in the sex ratio were generally greatest in the rural-nonfarm population and least in the urban population. Based upon the total white population by divisions, the coefficient of variation for the rural-nonfarm category was approximately twice as great as for the rural-farm group. Among nonwhites in the South, the rural-farm population exhibited the least variation in sex composition while the rural-nonfarm group was the most variable.

Sex ratios for all residence categories of the white population were high in the areas farthest from an SMSA. In relation to distance from metropolitan areas, the range in the rural-farm and the rural-nonfarm whites was identical.

Fertility. Based upon the ratios of children ever born to married women aged 15 to 24, 25 to 34, and 35 to 44, fertility levels for rural-farm women were consistently higher than for urban women. While the rural-farm fertility level was generally higher than the rural-nonfarm level, it was more similar in the rural categories than in the level in either group was to the level in urban areas.

Residence in metropolitan State economic areas generally depressed fertility levels in each residence group.

Based upon the fertility levels of white women in the nine divisions, the rural-farm levels exhibited less variation than those of rural-nonfarm or urban women. This was particularly evident for white women 35 to 44, and to a lesser degree for white women 25 to 34. The coefficient of variation, however, was slightly higher for rural-farm white women 15 to 24 than for comparable rural-nonfarm and urban women.

In both metropolitan and nonmetropolitan SEA's of the nine divisions, fertility levels for rural-farm white women 35 to 44 exhibited less variation than comparable rural-nonfarm or urban groups. The coefficient of variation for rural-farm white women aged 35 to 44 was slightly greater for those having metropolitan rather than nonmetropolitan residence.

Educational attainment and enrollment. The level of educational attainment for the adult population of the United States in 1960 was clearly lowest for rural-farm residents and highest for urban residents. This difference was generally true of whites and nonwhites of both sexes. While enrollment rates for the rural population generally lagged behind urban enrollment rates, the levels for the rural-farm population were more favorable than those for the rural-nonfarm groups.

School enrollment rates for all ages in the rural-farm sector, however, exhibited greater variation than those for rural-nonfarm or urban residents. Coefficients of variation for the rural-nonfarm population at all ages (5 and 6, 7 to 13, 14 to 19, and 20 to 34) were intermediate but more nearly corresponded to the rural-farm than to urban variations. In all residence categories, the coefficients of variation were greatest for the 5 and 6, 18 and 19, and 20 to 34 age groups.

Occupational distributions. Only 5.5 percent of all employed males in the United States were classified as farmers and farm managers in 1960, another 2.8 percent were farm laborers and foremen. While 8.3 percent of all employed males were in occupations closely identified with agriculture, only 1.7 percent of all employed females were in comparable occupations. Farm operators represented a small segment of the labor force as indicated by the fact that in only 20 percent of the counties in the conterminous United States did they comprise as much as 30 percent of the total county labor force. A majority of these counties were located in the West North Central, East South Central, and West South Central Divisions.

The rural-farm population is highly heterogeneous when classified by occupation. Approximately two-thirds of all employed rural-farm white males were employed as farmers and farm managers or as farm laborers and foremen. However, less than one-fourth of all employed rural-farm white females were employed in agriculture. Comparable data for rural-farm nonwhites showed higher rates of agricultural employment.

Large divisional variations existed with respect to the occupational structure of residents in the rural-farm sector. The proportion of white males employed as farmers and farm managers ranged from 41.5 percent in New England to 69.6 percent in the West North Central States. The percentage of farm laborers and managers ranged from 11.3 percent in the East North Central to 20.6 percent in the Mountain States. Measured in this way, three-fourths or more of all white rural-farm males in the West North Central and Mountain States were directly employed in agriculture. In all other divisions, the proportion so employed was less than two-thirds, with the lowest in the South Atlantic States. Relatively large proportions of white males were employed as operatives and kindred workers, ranging from 5.4 percent in the West North Central to 13.1 percent in the South Atlantic States.

The occupational structure of the rural-nonfarm population indicated little direct relationship to primary agricultural pursuits. Only 3.3 percent of all rural-nonfarm white males were employed as farmers and farm managers; another 3.9 percent, as farm laborers and foremen, yielding only 7.2 percent of all rural-nonfarm white males employed in the two occupational categories central to agriculture. The proportion of rural-nonfarm white males, however, ranged from only 3.5 percent in the Middle Atlantic to 14.0 percent in the Mountain Division. Based on this distribution, the rural-nonfarm white male population was more closely linked to agricultural occupations west of the Mississippi than it was east of the Mississippi.

The employment of rural-farm white males in agriculture was closely related to the distance of the county of residence from an SMSA. It was less closely related to the size-distance variable. These relationships were not as strong for other color and sex categories of the rural-farm population. Since the employment of rural-farm white males outside of agriculture increased as proximity to urban areas increased, it may be concluded that the entire occupational structure for these males was related to distance from large urban areas.

Income. Regardless of the measure used, the income of the rural population in 1960 was well below that of the urban population. The greatest gap was between the rural-farm and the urban sector.

The median income level for white families was highest in urban areas in all divisions, and the variation among divisions was relatively small. In all divisions, the income level for white families classified as rural-farm was lowest of the three residence categories and the relative variation was the greatest. With few exceptions, the median family income of nonwhites was markedly lower than for whites in the same residence and regional components. As in the case of white family income, the relative variation in nonwhite income was greatest for rural-farm residents and lowest for urban residents.

Earnings by occupational category demonstrated that urban residents received higher earnings in each occupation than did rural residents. For most occupational groups, the ratio of urban to rural-farm earnings was greater than other residence comparisons. This was true for both males and females. Generally the earnings in each occupation were highest in all residence groups in the most highly urban areas. Coefficients of variation among divisions were usually greater for rural-farm males and females, regardless of occupation, than for other residence and sex categories.

Rural-farm and rural-nonfarm residence concepts

The problem of homogeneity. It has been known for some time that the use of the simple three-fold residence categories of urban, rural-nonfarm, and rural-farm without refinement leads to numerous absurdities. On the one hand, the urban population may encompass a metropolis such as Detroit or New York containing millions and a Podunk Center containing a scant 2,500 persons. On the other hand, the rural population is a composite which includes persons residing on farms as well as persons in rural areas but classified as "nonfarm." A large fraction of these people are fully associated with the life of urban areas. In contemporary America, it is patently absurd to use the term "rural" to describe a large part of the population which is identified as rural by Census definition.

As the foregoing suggests, the populations presently defined as rural-farm and as rural-nonfarm are far from being homogeneous groups. In certain characteristics they tend to differ markedly from the urban population as well as from each other. At the same time, the differences within individual residence classifications are often as large as those that separate and identify the various categories.

The redefinition of the rural-farm population in 1960 apparently resulted in removing from the farm population a substantial number of rural people who were not primarily dependent upon farming. This new definition had the effect of reducing the proportion of the farm population working in nonagricultural industries, but it also left a farm population with great diversity in this regard. Thus, this change in definition which increased the occupational homogeneity of the rural-farm population probably reduced that of the rural-nonfarm population.

On the basis of the existing definition, living on a farm brings relatively little homogeneity in either social or economic functions. As matters now stand, the major source of homogeneity within the farm population stems from the fact that residence is on a place defined by the Census as a farm. These places vary immensely in both physical and economic attributes. Some are still little more than rural residences, while others are multi-million dollar investments in agricultural production facilities.

While the definition of "rural-farm" rests upon the tenuous and changing definition of a "farm," it is concise as compared to the definition of "rural-nonfarm." Essentially, the latter population is a residual category that fails to fit within the urban and rural-farm definitions. Neither the urban nor the rural-farm residence classification is completely satisfactory, but the rural-nonfarm classification is even less so, because it contains all of the problems of the other residence definitions compounded in numerous ways.

The widespread dissatisfaction with the rural-nonfarm category has been reflected in its virtual abandonment in demographic analysis. Reference to the residential diversity and residual character of this group has been made throughout the monograph. Examination of the characteristics of this residence group as well as subsequent analyses lend support to this opinion.

The differing characteristics and rural or urban orientation of the rural-nonfarm population are indicated by the fact that in the highly urbanized Northeast, nearly three-fourths of the population in this group resides within 50 miles of an SMSA, while in the West, more than two-thirds resides more than 50 miles from an SMSA. Under such conditions, the occupational composition of this residence category is markedly different. The age composition exhibits more variability than other residence groups for the young adult ages and for the most advanced ages. Other population attributes, including sex composition, level of schooling, income, and fertility, reveal that the rural-nonfarm population category was heterogeneous and subject to great regional variation.

The evidence appears overwhelming that the utility of the present rural residence classifications is limited. They seem to be partly the result of outmoded historical beliefs about the nature of our society in general and of farming in particular. The assumption that rural people are engaged primarily in producing food and fiber is obviously inaccurate, and even the assumption that within this category most rural-farm people are engaged in farming is increasingly questionable in many areas of the country. Therefore, a brief examination of the purpose and method of residence classification seems in order.

The purpose of Census classification

The present residence classification used by the Census is based on the assumption that rural people were farmers and that farming was an identifiable occupation as well as a way of life. Prior to the 1920's it became increasingly evident that all rural people were not engaged in agricultural pursuits. Consequently the rural residence category was subdivided, apparently in the belief that the rural-farm segment could be maintained as a separate identifiable component of the population.

The attempt to maintain the rural-farm residence category probably arose from the interest in identifying and analyzing the rural-farm population for purposes of public policy. There has been continuous and extensive Federal intervention in the marketing of farm products since the late 1920's, largely in the belief that by so doing the welfare of families engaged in producing food and fiber would be enhanced. The aggregate statistics regarding the welfare of the rural-farm population have been widely used in justifying these actions. The fact is, however, that the increasing divergence between rural-farm residence and dependence upon farming for a living substantially decreases the relevance of the commodity price support programs to rural-farm welfare. Indeed, commodity programs do very little to help those with the lowest incomes in rural areas because of the highly skewed distribution of farm output. Thus, the use of the rural-farm sector as a base population for what is commonly known as agricultural policy obscures more than illuminates the issues involved.

An agricultural policy primarily concerned with the welfare of rural people, or even of rural-farm people (whatever the justification), would give a policy rationale for maintaining the present residence classifications. The continued emphasis upon commodity price supports and the propensity of agricultural policy makers to ignore the welfare of groups not touched by these programs—subsistence farmers and hired farm labor, etc.—strongly suggest that the political power structure has been little concerned with rural people as such. Even if there were a genuine concern for rural people, the present rural residence classifications still are of little use.

This is not to imply that those living in remote and sparsely settled areas do not face economic and social problems vastly different from those of people living in densely populated areas. Social organization and personal interrelations are different; the labor market and the social structure are different; and the value systems may still be different. But these differences no longer appear to be related primarily to the occupation of farming. The large commercial farmer in a metropolitan county may have more in common with his urban business counterpart in a nearby metropolis than with either the subsistence farmer in the rural South or the banker in a remote village removed from a metropolitan area. Our results indicate that much of the economic and social variations in rural areas are a function of the proximity to metropolitan areas and that future Census classifications should recognize this face. It is with such considerations in mind that we make certain recommendations for future Census classifications and procedures.

A proposal for Census classification and procedures

We believe that metropolitan and nonmetropolitan categories now used by the Bureau of the Budget should be retained as a fundamental part of a residence classification scheme. Within each of these categories there should be an urban and rural component, with the latter subdivided into village and open-country residence. Thus the proposed classification would appear as follows:

1. Metropolitan county
   a. Urban
   b. Rural

        (1) Village
        (2) Open country

2. Nonmetropolitan county
    a. Urban
    b. Rural
        (1) Village
        (2) Open country

The criteria currently used by the Bureau of the Budget in the delineation of standard metropolitan statistical areas have not been evaluated in this study. However, the importance of the influence of metropolitan areas on hinterland populations has been stressed throughout the monograph, and it is on the basis of the evidence presented that we recommend a metropolitan-nonmetropolitan distinction as an essential part of the residence classification scheme.

Based in part on evidence concerning the character of the rural-nonfarm population, we believe that the urban population should be extended to include urbanized areas around cities of 25,000 or more. Therefore, we advocate an extension of the delineation procedures currently applied around only cities of 50,000 or more. Undoubtedly new elements in the specification of criteria applicable to smaller cities must be introduced.

The proposed rural category would be subdivided into "village" and "open-country." The village category would ideally include all incorporated and unincorporated places and clusters under 2,500 population. (Some minimum, arbitrary, cut-off point such as 200 or less, may be necessary.) Population in open country, therefore, would include not only persons residing in the open country, but also those in small hamlets if a 200 population minimum is established, and those residing outside of the incorporated boundaries of urban places having a population between 2,500 and 25,000.

There would be difficult problems in putting the proposed classifications—particularly the village and open-country categories—into use. Diverse settlement patterns and modes of residence mark the countryside. Particularly troublesome would be string settlements, resort areas in which residence may or may not be seasonal, isolated mining and industrial developments, military installations, and institutions of numerous kinds.

An extension of the urbanized area concept to cities between 25,000 and 50,000 would be expected to eliminate a substantial part of the problem concerning string developments along highways leading to centers of this size. In other instances of this type of development, string developments would be classified as open country except when they fall within the incorporated limits of cities or the boundaries of villages. The 1960 census recognized 9,874 incorporated places under 1,000 population and 3,515 incorporated places between 1,000 and 2,500, with a combined population in excess of 9.6 million. In addition, the census recognized 956 unincorporated places with a population of nearly 1.5 million. There are, of course, many unincorporated places with fewer than 1,000 population. In order to apply the village category, it would be necessary to identify boundaries for all such clusters of 200 or more, which usually have place names and are thought of as villages by local residents. Due to the temporary and/or impacted quality of the residence of military installations, institutions of many types, and resort hotels found in the open country, it would seem advisable to eliminate residents of such types from any classification by residence. After having performed the operations suggested, the residual would be made up of open-country residents.

It is clear that the principal procedure suggested for defining residence categories would be costly. Due to population growth and annexations, village delineations would of necessity have to be brought up to date at each census. It is possible that the residence classification of village and open country in metropolitan counties might be unnecessary. Since a large proportion of such counties are highly urban, and rapidly expanding into the countryside, a rural residual may meet the needs of most users. To eliminate this detail for metropolitan counties, however, would not markedly reduce the magnitude of the total task.

The proposed reclassification of residence, however, would not be satisfactory to rural sociologists, agricultural economists, and others, without alterations in the census of agriculture. In our judgment, there should be greater coordination among the censuses of agriculture, population, and housing. As matters now stand, the census of agriculture is taken every 5 years and concentrates primarily on an array of measurements for places called farms. Relatively little information is currently gained regarding the people dependent upon these places for a living. The census of population concentrates upon a wide array of social and economic characteristics of the population. Unfortunately, the two censuses cannot now be directly related, so that an understanding of the relationships of farms and farming as an occupation for rural people is highly nebulous. In our judgment, the provision of demographic data for populations associated with farms should be undertaken as a collaborative effort of the census of agriculture and the censuses of population and housing.

It is recommended that everyone who has income from an agricultural source be included. Detail in tabulations could vary, depending upon the kind and amount of agricultural production and/or income. As matters now stand, many rural people partially dependent upon income from agriculture are not in the rural-farm population nor are they classified as farmers. Conversely, many rural-farm people are only nominally associated with agriculture.

In essence, the proposed redefinitions and changed procedures would result in a more useful and symmetrical residence classification in the censuses of population and housing and would increase the utility of the census of agriculture.

The proposed residence classification would, of course, eliminate the rural-farm and rural-nonfarm concepts. The categories replacing them, we believe, would be more descriptive of the residence pattern of the American population. Furthermore, the open-country and village categories, should be of special interest in their own right to rural sociologists, agricultural economists, and others. Neither category could be equated with an agricultural occupation, a burden borne in the past by the rural-farm category. We suggest that increased responsibility be placed upon the existing census of agriculture to provide necessary social and demographic characteristics of the population associated with farms and agricultural production. We believe that the proposed coordination of these censuses would yield more meaningful data on the rural population as well as the characteristics of those dependent upon agriculture as an occupation.

Many users of demographic, social, and economic data for the rural-farm population will undoubtedly be reluctant to abandon this residence category. While the termination of any statistical series is painful for some, it is evident that changed social and economic conditions and needs call for re-examination and change in definitions. We believe that our proposal recognizes the present and future realities of rural America.

STATISTICAL APPENDIX

The results of the analyses of variations among counties in age-specific birth rates and in median family incomes were discussed in chapters V and IX. This appendix presents a brief outline of the models used and of the statistical tests of the hypotheses discussed.

The models

Multiple regression techniques were used in the analyses of median family incomes and of age-specific birth rates. As the procedures used in the two analyses were identical, this discussion is presented in terms of the family income analysis.

Variations among counties in the median incomes of rural-farm, rural-nonfarm, and urban white families were analyzed separately for each division, region, and for the conterminous United States. Variations among counties in the median incomes of rural-farm, rural-nonfarm, and urban nonwhite families were analyzed separately for each of the three southern divisions and for the South. Three alternative equations were estimated using each of the dependent variables mentioned above. The three equations were identical with the exception of one independent variable. Each equation includes one of the three variables representing alternative hypotheses with respect to the relationship between median family income in a county and the location of the county relative to industrial-urban centers. These variables were "distance," "size-distance$_1$," and "size-distance$_2$" which are discussed in chapter I. The equation which includes the "size-distance$_1$" variable was ultimately chosen to be discussed in the text.

The equation which was estimated can be written in the following general fashion:

$$Y_i = \alpha + \beta_1 X_{i1} + \beta_2 X_{i2} + \ldots + \beta_j X_{ij} + \ldots + \beta_p X_{ip} + u_i,$$

where:

$$i = 1, \ldots, N,$$

and:

Y_i is the *ith* observed value of the dependent variable.

X_{ij} is the *ith* value of the *jth* independent variable.

u_i is the *ith* random disturbance term. It is assumed that the u_i are independent and come from a normal distribution with zero mean and σ^2 variance.

α is the general constant term.

β_j is the coefficient of the *jth* independent variable.

In addition to the statistics usually computed (such as the simple correlation coefficients between all variables, the estimated partial regression coefficients, the standard error of estimate, the multiple correlation coefficient, and the estimated standard errors of the partial regression coefficients) beta coefficients were also computed. They were computed from the formula

$$\hat{\beta}_j = \hat{b}_j \frac{S_{x_j}}{S_y},$$

where:

$\hat{\beta}_j$ is the beta coefficient of the *jth* independent variable. This statistic is also called the estimated standard partial regression coefficient of the *jth* variable.

$\hat{b}_j$ is the estimated partial regression coefficient of the *jth* independent variable.

S_{x_j} is the standard deviation of the *jth* independent variable.

S_y is the standard deviation of the dependent variable.

The beta coefficient is a pure number and takes into account not only the estimated partial regression coefficient but also the variation in X_j relative to the variation in Y. It serves as an index of the importance of X_j in accounting for the variance in Y relative to other independent variables.

The statistical tests

The "t" test: The "t" test was used to ascertain whether each independent variable had an effect on the dependent variable significantly different from zero. That is:

Ho: $\beta_j = 0$

Hl: $\beta_j \neq 0$.

The chosen level of significance was .05. The form of the "t" test was

$$t = \frac{\hat{b}_j - 0}{S_{\hat{b}_j}};$$

where:

$\hat{b}_j$ is the estimated partial regression coefficient of the *jth* independent variable.

$S_{\hat{b}_j}$ is the estimated standard error of $\hat{b}_j$.

The multiple comparison test: There was interest in ascertaining whether there were differences in the effects of the independent variables on the dependent variables among residence classifications and among geographic regions. Answers to these questions were obtained by testing the equality of partial regression coefficients among equations. The test used was the multiple comparison test by Scheffé.[1]

As an example of the test suppose we have K equations and we wish to test the equality of the regression coefficients of variable X_j in the K equations. Let:

$\hat{b}^k_j$ be the estimated partial regression coefficient of X_j in equation k $(k=1, \ldots, u, \ldots, v, \ldots, K)$.

c^k_{jj} be the jth diagonal element of the $(X'X)^{-1}$ matrix of equation k.

SSU^k be the sum of squares of residuals from equation k.

Q^k be the degrees of freedom from equation k ($Q^k=N^k-p^k$, where N^k is the number of observations and p^k the number of parameters in equation k).

To test:

$$Ho\colon \beta^u_j-\beta^v_j=0$$

$$H1\colon \beta^u_j-\beta^v_j\neq 0,$$

form:

$$(\hat{b}^u_j-\hat{b}^v_j)^2/(c^u_{jj}+c^v_{jj})=SSD_{uv},$$

and:

$$\sum_{k=1}^{K} SSU^k=SSU.$$

Then, the test statistic

$$\frac{SSD_{uv}/(K-1)}{SSU/\sum_{k=1}^{K} Q^k}$$

follows the F distribution with $K-1$ and $\sum_{k=1}^{K} Q^k$ degrees of freedom. The chosen level of significance of the test was .05.

One assumption which must be met for the test to be valid is that the residual variances in the K equations be equal; that is, $\sigma_1^2=\sigma_2^2=\ldots=\sigma_K^2$. In the median family income analysis this assumption was not met.[2]

Because of the very large sample sizes used in estimating the equations, the estimated residual variances ($S^2_{Y.X^k}$) from the equations could be considered as close approximations of the residual variances and the following modified test was used.[3]

Let $S^2_{Y.X^k}$ be the standard error of estimate squared from equation k. And, define:

$$w_k=\frac{S^2_{Y.X^k}}{S^2_{Y.X^l}}.$$

Form:

$$(\hat{b}_j^u-\hat{b}_j^e)^2/(w_u c_{jj}^u+w_e c_{jj}^e)=SSW_{ue},$$

and:

$$\sum_{k=1}^{K}\frac{1}{w_k}SSU^k=SSUW.$$

Then, the test statistic

$$\frac{SSW_{ue}/(K-1)}{SSUW/\sum_{k=1}^{K}Q^k}$$

follows the F distribution with $K-1$ and $\sum_{k=1}^{K}Q^k$ degrees of freedom. Again, the chosen level of significance of the test was .05.

NOTES

[1] K. A. Brownlee, *Statistical Theory and Methodology in Science and Engineering* (New York: John Wiley and Sons, Inc., 1960), pp. 252–254.

[2] Bartlett's test of homogeneity of variance was used to test the validity of this assumption. See G. W. Snedecor, *Statistical Methods*, 4th ed. (Ames: The Iowa State College Press, 1955), p. 251.

[3] R. L. Gustafson, "Testing Equality of Coefficients in Different Regressions" (Revised), Mimeo (Michigan State University, East Lansing, Mich., Apr. 3, 1961).

Table A-1.—Population and Percent Distribution by Distance From Nearest Standard Metropolitan Statistical Area, by Residence and Color, for the Conterminous United States: 1960

Residence and color	Total		Inside SMSA counties		Distance from nearest SMSA[1]											
					Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 miles or more	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
Total	178,460,845	100.0	113,796,316	63.8	19,542,290	11.0	32,693,205	18.3	8,269,989	4.6	2,341,848	1.3	952,087	0.5	865,111	0.5
White	158,454,808	100.0	100,907,789	63.7	17,610,574	11.1	28,325,903	17.9	7,633,202	4.8	2,277,097	1.4	887,379	0.6	812,864	0.5
Nonwhite	20,006,037	100.0	12,888,527	64.4	1,931,716	9.7	4,367,302	21.8	636,787	3.2	64,751	0.3	64,708	0.3	52,246	0.3
Rural farm	13,431,791	100.0	1,670,469	12.4	3,127,467	23.3	6,152,840	45.8	1,718,319	12.8	391,882	2.9	181,972	1.4	188,842	1.4
White	11,848,722	100.0	1,562,052	13.2	2,807,080	23.7	5,186,162	43.8	1,560,192	13.2	383,170	3.2	169,587	1.4	180,479	1.5
Nonwhite	1,583,069	100.0	108,417	6.8	320,387	20.2	966,678	61.1	158,127	10.0	8,712	0.6	12,385	0.8	8,363	0.5
Rural nonfarm	40,320,886	100.0	12,262,811	30.4	8,691,270	21.6	14,374,243	35.6	3,306,306	8.2	960,722	2.4	401,251	1.0	324,283	0.8
White	36,395,656	100.0	11,537,421	31.7	7,782,309	21.4	12,487,952	34.3	3,019,697	8.3	923,730	2.5	356,437	1.0	288,110	0.8
Nonwhite	3,925,230	100.0	725,390	18.5	908,961	23.2	1,886,291	48.1	286,609	7.3	36,992	0.9	44,814	1.1	36,173	0.9
Urban	124,708,168	100.0	99,863,036	80.0	7,723,553	6.2	12,166,122	9.8	3,245,364	2.6	989,244	0.8	368,864	0.3	351,985	0.3
White	110,210,430	100.0	87,808,316	79.6	7,021,185	6.4	10,651,789	9.7	3,053,313	2.8	970,197	0.9	361,355	0.3	344,275	0.3
Nonwhite	14,497,738	100.0	12,054,720	83.2	702,368	4.8	1,514,333	10.4	192,051	1.3	19,047	0.1	7,509	0.1	7,710	0.1

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Appendix table A-2.

Table A-2.—Population and Percent Distribution by Distance From Nearest Standard Metropolitan Statistical Area, by Residence and Color, by Regions for the Conterminous United States: 1960

Region, residence, and color	Total		Inside SMSA counties		Distance from nearest SMSA[1]											
					Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 miles or more	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
NORTHEAST																
Total	44,681,702	100.0	36,843,546	82.5	3,831,346	8.6	3,101,058	6.9	478,183	1.1	321,505	0.7	-	-	106,064	0.2
White	41,527,941	100.0	33,861,041	81.5	3,720,244	9.0	3,050,631	7.3	475,345	1.1	316,628	0.8	-	-	104,052	0.3
Nonwhite	3,153,761	100.0	2,982,505	94.5	111,102	3.5	50,427	1.6	2,838	0.1	4,877	0.2	-	-	2,012	0.1
Rural farm	912,423	100.0	343,455	37.7	246,576	27.0	232,462	25.5	53,234	5.8	25,294	2.8	-	-	11,402	1.2
White	905,713	100.0	340,189	37.5	244,347	27.0	231,584	25.6	53,026	5.9	25,258	2.8	-	-	11,309	1.2
Nonwhite	6,710	100.0	3,266	48.7	2,229	33.2	878	13.1	208	3.1	36	0.5	-	-	93	1.4
Rural nonfarm	7,926,261	100.0	4,207,160	53.1	1,617,622	20.4	1,652,012	20.8	234,435	3.0	161,030	2.0	-	-	54,002	0.7
White	7,782,615	100.0	4,126,338	53.0	1,584,296	20.4	1,627,984	20.9	232,376	3.0	158,960	2.0	-	-	52,661	0.7
Nonwhite	143,646	100.0	80,822	56.4	33,326	23.2	24,028	16.7	2,059	1.4	2,070	1.4	-	-	1,341	0.9
Urban	35,843,018	100.0	32,292,931	90.1	1,967,148	5.5	1,216,584	3.4	190,514	0.5	135,181	0.4	-	-	40,660	0.1
White	32,839,613	100.0	29,394,514	89.5	1,891,601	5.8	1,191,063	3.6	189,943	0.6	132,410	0.4	-	-	40,082	0.1
Nonwhite	3,003,405	100.0	2,898,417	96.6	75,547	2.5	25,521	0.8	571	0.0	2,771	0.1	-	-	578	0.0
NORTH CENTRAL																
Total	51,617,886	100.0	30,957,297	59.9	7,553,656	14.6	8,447,688	16.4	3,274,066	6.3	707,088	1.4	284,336	0.6	393,755	0.8
White	47,999,997	100.0	27,711,829	57.6	7,421,223	15.5	8,323,983	17.3	3,201,325	6.7	696,436	1.5	272,155	0.6	373,046	0.8
Nonwhite	3,617,889	100.0	3,245,468	89.7	132,433	3.7	123,705	3.4	72,741	2.0	10,652	0.3	12,181	0.3	20,709	0.6
Rural farm	5,392,571	100.0	586,005	10.9	1,460,490	27.1	2,094,433	38.8	874,736	16.2	191,488	3.6	77,457	1.4	107,962	2.0
White	5,361,129	100.0	584,256	10.9	1,455,276	27.1	2,086,510	38.9	863,190	16.1	190,827	3.6	76,083	1.4	104,987	2.0
Nonwhite	31,442	100.0	1,749	5.6	5,214	16.6	7,923	25.2	11,546	36.6	661	2.1	1,374	4.4	2,975	9.5
Rural nonfarm	10,745,701	100.0	2,905,416	27.0	3,031,891	28.2	3,137,967	29.3	1,143,319	10.6	280,852	2.6	103,002	1.0	143,254	1.3
White	10,555,502	100.0	2,856,398	27.0	2,997,076	28.4	3,090,516	29.3	1,114,690	10.6	273,909	2.6	94,491	0.9	128,422	1.2
Nonwhite	190,199	100.0	49,018	25.7	34,815	18.3	47,451	24.9	28,629	15.1	6,943	3.7	8,511	4.5	14,832	7.8
Urban	35,479,614	100.0	27,465,876	77.4	3,061,275	8.6	3,215,288	9.1	1,256,011	3.5	234,748	0.7	103,877	0.3	142,539	0.4
White	32,083,366	100.0	24,271,175	75.7	2,968,871	9.3	3,146,957	9.8	1,223,445	3.8	231,700	0.7	101,581	0.3	139,637	0.4
Nonwhite	3,396,248	100.0	3,194,701	94.0	92,404	2.7	68,331	2.0	32,566	1.0	3,048	0.1	2,296	0.1	2,902	0.1

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-2.—Population and Percent Distribution by Distance From Nearest Standard Metropolitan Statistical Area, by Residence and Color, by Regions for the Conterminous United States: 1960—Con.

Region, residence, and color	Total		Inside SMSA counties		Distance from nearest SMSA[1]											
					Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 miles or more	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
SOUTH																
Total	54,963,470	100.0	26,360,943	48.0	7,745,818	14.1	18,645,690	33.9	2,186,207	4.0	24,812	0.0	-	-	-	-
White	43,469,348	100.0	21,110,521	48.5	6,069,185	14.0	14,526,883	33.4	1,737,996	4.0	24,763	0.1	-	-	-	-
Nonwhite	11,494,122	100.0	5,250,422	45.7	1,676,633	14.6	4,118,807	35.8	448,211	3.9	49	0.0	-	-	-	-
Rural farm	5,920,797	100.0	467,654	7.9	1,398,499	23.6	3,530,106	59.7	516,561	8.7	7,977	0.1	-	-	-	-
White	4,439,238	100.0	379,868	8.6	1,086,630	24.5	2,582,548	58.1	382,225	8.6	7,967	0.2	-	-	-	-
Nonwhite	1,481,559	100.0	87,786	5.9	311,869	21.1	947,558	63.9	134,336	9.1	10	0.0	-	-	-	-
Rural nonfarm	16,876,833	100.0	3,491,150	20.7	3,873,517	23.0	8,487,348	50.2	1,012,723	6.0	12,095	0.1	-	-	-	-
White	13,553,880	100.0	2,972,929	21.9	3,037,680	22.4	6,712,047	49.6	819,142	6.0	12,082	0.1	-	-	-	-
Nonwhite	3,322,953	100.0	518,221	15.6	835,837	25.2	1,775,301	53.4	193,581	5.8	13	0.0	-	-	-	-
Urban	32,165,840	100.0	22,402,139	69.7	2,473,802	7.7	6,628,236	20.6	656,923	2.0	4,740	0.0	-	-	-	-
White	25,476,230	100.0	17,757,724	69.8	1,944,875	7.6	5,232,288	20.5	536,629	2.1	4,714	0.0	-	-	-	-
Nonwhite	6,689,610	100.0	4,644,415	69.4	528,927	7.9	1,395,948	20.9	120,294	1.8	26	0.0	-	-	-	-
WEST																
Total	27,197,787	100.0	19,634,530	72.2	411,470	1.5	2,498,769	9.2	2,331,533	8.6	1,288,443	4.7	667,751	2.5	365,291	1.3
White	25,457,522	100.0	18,224,398	71.6	399,922	1.6	2,424,406	9.5	2,218,536	8.7	1,239,270	4.9	615,224	2.4	335,766	1.3
Nonwhite	1,740,265	100.0	1,410,132	81.0	11,548	0.7	74,363	4.3	112,997	6.5	49,173	2.8	52,527	3.0	29,525	1.7
Rural farm	1,206,000	100.0	273,355	22.6	21,902	1.8	295,839	24.5	273,788	22.7	167,123	13.9	104,515	8.7	69,478	5.8
White	1,142,642	100.0	257,739	22.6	20,827	1.8	285,520	25.0	261,751	22.9	159,118	13.9	93,504	8.2	64,183	5.6
Nonwhite	63,358	100.0	15,616	24.6	1,075	1.7	10,319	16.3	12,037	19.0	8,005	12.6	11,011	17.4	5,295	8.4
Rural nonfarm	4,772,091	100.0	1,659,085	34.8	168,240	3.5	1,096,916	23.0	915,829	19.2	506,745	10.6	298,249	6.2	127,027	2.7
White	4,503,659	100.0	1,581,756	35.1	163,257	3.6	1,057,405	23.5	853,489	19.0	478,779	10.6	261,946	5.8	107,027	2.4
Nonwhite	268,432	100.0	77,329	28.8	4,983	1.9	39,511	14.7	62,340	23.2	27,966	10.4	36,303	13.5	20,000	7.5
Urban	21,219,696	100.0	17,702,090	83.5	221,328	1.0	1,106,014	5.2	1,141,916	5.4	614,575	2.9	264,987	1.2	168,786	0.8
White	19,811,221	100.0	16,384,903	82.7	215,838	1.1	1,081,481	5.5	1,103,296	5.6	601,373	3.0	259,774	1.3	164,556	0.8
Nonwhite	1,408,475	100.0	1,317,187	93.6	5,490	0.4	24,533	1.7	38,620	2.7	13,202	0.9	5,213	0.4	4,230	0.3

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-3.—PERCENT DISTRIBUTION OF THE RURAL-FARM POPULATION, BY AGE, SEX, AND COLOR, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Age and sex	United States		Northeast		North Central		South		West	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MALE										
Under 5 years	4.7	7.5	4.9	6.1	5.2	7.3	4.1	7.5	5.1	7.2
5 to 9 years	5.4	7.5	5.3	5.7	5.8	6.6	4.9	7.5	5.9	7.0
10 to 14 years	5.8	7.6	5.7	5.4	5.8	6.3	5.9	7.7	6.0	6.2
15 to 19 years	5.0	6.1	4.9	4.3	4.8	5.1	5.4	6.2	4.8	4.9
20 to 24 years	2.3	2.8	2.4	3.3	2.2	2.6	2.4	2.8	2.1	2.9
25 to 29 years	2.0	1.8	2.2	2.8	2.0	1.7	1.9	1.7	2.1	2.5
30 to 34 years	2.4	1.7	2.6	2.7	2.5	1.9	2.2	1.6	2.6	2.6
35 to 39 years	2.9	1.9	3.0	4.1	3.0	2.0	2.8	1.8	3.2	3.1
40 to 44 years	3.3	2.1	3.3	3.8	3.3	2.0	3.2	2.1	3.4	3.0
45 to 49 years	3.7	2.4	3.4	3.7	3.6	3.0	3.7	2.4	3.7	2.6
50 to 54 years	3.4	2.2	3.2	3.0	3.3	2.8	3.5	2.2	3.4	2.3
55 to 59 years	3.1	2.1	2.9	2.6	3.1	3.0	3.2	2.0	3.0	2.5
60 to 64 years	2.6	1.5	2.6	2.2	2.7	2.3	2.6	1.5	2.5	1.7
65 to 69 years	2.2	1.4	2.3	1.8	2.1	1.9	2.2	1.4	2.1	1.2
70 to 74 years	1.5	0.9	1.7	1.0	1.5	1.3	1.6	0.9	1.4	1.1
75 years and over	1.6	1.0	1.8	0.7	1.5	1.2	1.7	1.0	1.2	1.4
FEMALE										
Under 5 years	4.5	7.3	4.7	6.2	4.9	6.9	3.9	7.3	4.9	7.8
5 to 9 years	5.1	7.4	5.1	5.5	5.4	6.4	4.6	7.5	5.6	6.8
10 to 14 years	5.4	7.1	5.1	4.2	5.3	6.0	5.4	7.2	5.5	5.8
15 to 19 years	4.1	5.6	3.9	3.4	3.9	4.8	4.4	5.7	6.0	4.5
20 to 24 years	1.9	2.6	2.0	3.5	1.8	2.1	2.0	2.6	1.8	2.8
25 to 29 years	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.2	2.8
30 to 34 years	2.6	2.1	2.7	3.5	2.6	2.3	2.5	2.1	2.8	2.9
35 to 39 years	3.1	2.4	3.1	3.7	3.1	2.5	3.0	2.3	3.3	3.4
40 to 44 years	3.3	2.4	3.2	3.4	3.3	2.5	3.4	2.4	3.3	2.6
45 to 49 years	3.4	2.4	3.1	3.0	3.3	2.6	3.7	2.4	3.4	2.0
50 to 54 years	3.1	2.1	2.9	2.3	2.9	2.6	3.4	2.1	2.9	1.4
55 to 59 years	2.8	1.8	2.6	2.2	2.6	3.3	3.0	1.8	2.5	1.7
60 to 64 years	2.2	1.4	2.3	1.4	2.2	1.5	2.4	1.4	1.9	1.2
65 to 69 years	1.8	1.2	2.0	1.0	1.7	1.6	2.0	1.2	1.5	1.1
70 to 74 years	1.2	0.8	1.4	0.8	1.2	1.1	1.4	0.8	1.0	0.7
75 years and over	1.4	0.9	1.7	0.6	1.3	0.9	1.6	0.9	0.9	0.6

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-4.—PERCENT DISTRIBUTION OF THE RURAL-NONFARM POPULATION, BY AGE, SEX, AND COLOR, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Age and sex	United States		Northeast		North Central		South		West	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MALE										
Under 5 years	6.0	7.4	6.0	6.2	6.2	6.3	5.9	7.5	6.1	8.3
5 to 9 years	5.7	6.9	5.6	5.3	5.8	5.5	5.6	7.0	5.9	6.6
10 to 14 years	5.2	6.1	5.0	5.0	5.0	5.3	5.4	6.3	5.3	5.3
15 to 19 years	4.2	5.1	3.7	5.7	3.7	5.4	4.6	5.0	4.5	5.2
20 to 24 years	3.2	3.6	2.5	4.8	2.8	5.4	3.7	3.3	3.9	5.8
25 to 29 years	3.0	2.8	2.9	4.3	2.9	4.2	3.2	2.5	3.2	4.4
30 to 34 years	3.3	2.7	3.5	4.2	3.2	4.1	3.3	2.5	3.4	3.5
35 to 39 years	3.4	2.5	3.6	4.0	3.2	3.5	3.3	2.4	3.5	3.0
40 to 44 years	3.1	2.3	3.3	3.2	2.9	2.9	3.0	2.2	3.2	2.5
45 to 49 years	2.9	2.3	3.1	2.7	2.8	2.6	2.8	2.3	3.1	2.4
50 to 54 years	2.5	2.0	2.7	2.4	2.5	2.2	2.4	2.0	2.6	2.3
55 to 59 years	2.2	1.9	2.2	2.4	2.2	2.3	2.1	1.8	2.2	2.1
60 to 64 years	1.8	1.3	1.9	1.6	1.9	1.8	1.6	1.3	1.8	1.3
65 to 69 years	1.6	1.4	1.6	1.4	1.8	1.6	1.5	1.4	1.6	1.0
70 to 74 years	1.3	1.0	1.2	0.9	1.5	1.2	1.1	1.0	1.3	0.7
75 years and over	1.5	1.2	1.4	1.0	1.9	1.5	1.3	1.3	1.4	0.9
FEMALE										
Under 5 years	5.8	7.4	5.8	6.0	6.0	6.1	5.6	7.4	5.8	8.0
5 to 9 years	5.4	6.8	5.3	5.0	5.4	5.7	5.3	7.0	5.5	6.7
10 to 14 years	4.9	5.9	4.7	4.4	4.8	4.7	5.1	6.1	4.9	5.1
15 to 19 years	3.7	4.4	3.4	3.6	3.5	3.8	4.0	4.6	3.6	3.6
20 to 24 years	2.9	2.9	2.6	3.1	2.8	2.6	3.1	2.9	2.8	3.3
25 to 29 years	3.1	2.7	3.1	3.4	3.0	2.7	3.2	2.7	3.0	3.4
30 to 34 years	3.3	2.7	3.6	3.3	3.2	2.7	3.3	2.7	3.1	3.0
35 to 39 years	3.4	2.6	3.6	3.1	3.2	2.5	3.3	2.6	3.3	2.5
40 to 44 years	3.0	2.4	3.3	2.5	2.9	2.2	2.9	2.4	2.9	1.9
45 to 49 years	2.8	2.3	2.9	2.2	2.7	2.1	2.7	2.4	2.7	1.7
50 to 54 years	2.4	2.0	2.6	2.2	2.4	2.0	2.4	2.1	2.3	1.3
55 to 59 years	2.1	1.9	2.2	1.9	2.2	2.0	2.1	1.9	2.0	1.3
60 to 64 years	1.8	1.5	1.9	1.3	2.0	1.5	1.7	1.5	1.6	0.8
65 to 69 years	1.7	1.5	1.7	1.1	1.9	1.3	1.6	1.6	1.4	0.8
70 to 74 years	1.3	1.1	1.3	0.9	1.6	1.0	1.2	1.1	1.1	0.5
75 years and over	1.7	1.3	1.8	1.0	2.1	1.3	1.5	1.3	1.3	0.7

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-5.—PERCENT DISTRIBUTION OF THE URBAN POPULATION, BY AGE, SEX, AND COLOR, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Age and sex	United States		Northeast		North Central		South		West	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MALE										
Under 5 years	5.5	7.2	5.0	6.7	5.8	7.6	5.6	7.2	5.7	7.3
5 to 9 years	5.0	6.1	4.6	5.5	5.1	6.2	5.1	6.2	5.2	6.0
10 to 14 years	4.4	4.7	4.3	4.3	4.4	4.6	4.6	5.0	4.6	4.6
15 to 19 years	3.4	3.3	3.3	3.0	3.3	3.1	3.6	3.7	3.5	3.1
20 to 24 years	2.9	2.9	2.6	3.0	2.8	2.7	3.3	2.9	3.0	3.4
25 to 29 years	3.1	3.1	2.8	3.5	3.0	3.2	3.3	2.8	3.2	3.8
30 to 34 years	3.4	3.3	3.2	3.7	3.3	3.5	3.5	2.9	3.4	3.8
35 to 39 years	3.5	3.3	3.5	3.7	3.4	3.5	3.6	2.9	3.6	4.0
40 to 44 years	3.2	2.9	3.3	3.1	3.1	3.0	3.2	2.6	3.3	3.2
45 to 49 years	3.0	2.6	3.2	2.7	2.9	2.7	2.9	2.6	3.0	2.8
50 to 54 years	2.7	2.2	3.0	2.3	2.7	2.2	2.5	2.2	2.6	2.4
55 to 59 years	2.4	2.0	2.7	2.1	2.4	2.1	2.1	2.0	2.2	2.0
60 to 64 years	1.9	1.4	2.2	1.4	2.0	1.4	1.7	1.4	1.8	1.3
65 to 69 years	1.6	1.1	1.9	1.1	1.7	1.1	1.4	1.2	1.5	0.9
70 to 74 years	1.2	0.7	1.3	0.7	1.2	0.7	1.0	0.8	1.2	0.7
75 years and over	1.2	0.7	1.3	0.6	1.3	0.7	1.1	0.8	1.3	0.7
FEMALE										
Under 5 years	5.3	7.2	4.8	6.6	5.6	7.6	5.4	7.2	5.5	7.2
5 to 9 years	4.8	6.1	4.4	5.4	4.9	6.2	5.0	6.3	5.1	6.0
10 to 14 years	4.3	4.8	4.1	4.4	4.3	4.7	4.5	5.1	4.5	4.6
15 to 19 years	3.6	3.7	3.4	3.5	3.6	3.4	3.8	4.0	3.5	3.3
20 to 24 years	3.2	3.6	2.9	4.0	3.3	3.5	3.5	3.5	3.2	3.7
25 to 29 years	3.1	3.7	2.9	4.2	3.1	3.8	3.4	3.4	3.2	4.0
30 to 34 years	3.5	3.9	3.4	4.5	3.4	4.1	3.7	3.6	3.5	4.2
35 to 39 years	3.7	3.8	3.8	4.3	3.6	3.8	3.8	3.5	3.8	4.1
40 to 44 years	3.5	3.3	3.7	3.6	3.3	3.2	3.3	3.2	3.4	3.2
45 to 49 years	3.2	2.9	3.5	3.1	3.1	2.8	3.1	3.0	3.1	2.6
50 to 54 years	2.9	2.4	3.2	2.5	2.8	2.3	2.8	2.5	2.7	1.9
55 to 59 years	2.6	2.2	2.9	2.3	2.6	2.1	2.4	2.2	2.3	1.7
60 to 64 years	2.3	1.5	2.6	1.6	2.2	1.5	2.0	1.6	2.0	1.2
65 to 69 years	2.0	1.3	2.3	1.2	2.0	1.2	1.8	1.5	1.8	0.9
70 to 74 years	1.6	0.9	1.7	0.8	1.6	0.8	1.4	1.0	1.5	0.6
75 years and over	1.9	1.0	2.0	0.8	2.0	0.8	1.7	1.1	1.9	0.6

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-6.—Percent Distribution by Age of the White and Nonwhite Populations of the Rural and Urban Areas, by Regions and Divisions, for the Conterminous United States: 1960

Residence, region, and division	White								Nonwhite							
	All ages	Under 5 years	5 to 14 years	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 years and over	All ages	Under 5 years	5 to 14 years	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 years and over
RURAL FARM																
Regions:																
Northeast	100.0	9.6	21.2	8.8	4.5	22.2	23.0	10.7	100.0	12.3	20.7	7.7	6.8	26.0	20.4	6.0
North Central	100.0	10.1	22.3	8.6	4.0	22.0	23.6	9.4	100.0	14.2	25.3	9.9	4.7	17.0	21.0	7.9
South	100.0	8.0	20.8	9.8	4.4	21.0	25.6	10.4	100.0	14.8	29.9	11.9	5.4	16.1	15.7	6.1
West	100.0	10.0	23.0	8.8	3.9	22.8	23.2	8.1	100.0	15.0	25.8	9.4	5.7	22.6	15.4	6.0
Divisions:																
New England	100.0	9.3	21.3	8.3	4.1	21.5	24.1	11.5	100.0	13.4	18.7	8.3	4.3	20.6	19.4	15.3
Middle Atlantic	100.0	9.7	21.2	8.9	4.5	22.3	22.8	10.5	100.0	12.2	20.9	7.6	7.1	26.5	20.5	5.2
East North Central	100.0	9.5	21.8	8.8	4.1	21.6	23.6	10.6	100.0	10.3	21.1	10.5	3.9	16.5	27.5	10.2
West North Central	100.0	10.6	22.6	8.5	3.9	22.4	23.6	8.3	100.0	15.8	27.1	9.6	5.0	17.2	18.2	7.0
South Atlantic	100.0	7.7	20.6	10.1	4.7	21.4	24.9	10.7	100.0	14.6	30.3	12.2	5.7	17.4	14.3	5.3
East South Central	100.0	8.1	21.1	10.0	4.6	20.7	25.0	10.6	100.0	15.2	29.8	11.7	5.1	14.8	16.6	6.8
West South Central	100.0	8.3	20.8	9.2	3.7	20.9	27.1	9.9	100.0	14.5	28.9	11.3	5.0	15.1	18.1	7.1
Mountain	100.0	11.2	24.2	9.1	4.2	23.2	21.2	6.8	100.0	17.5	27.0	10.6	6.8	20.5	12.6	4.9
Pacific	100.0	9.0	21.9	8.6	3.7	22.4	25.0	9.3	100.0	11.5	24.0	7.7	4.1	25.7	19.5	7.6
RURAL NONFARM																
Regions:																
Northeast	100.0	11.8	20.6	7.1	5.1	26.8	19.5	9.1	100.0	12.1	19.7	9.3	7.9	28.0	16.7	6.3
North Central	100.0	12.2	21.0	7.2	5.6	24.6	18.6	10.7	100.0	12.4	21.2	9.2	8.1	24.8	16.6	7.8
South	100.0	11.5	21.5	8.6	6.7	25.6	17.9	8.2	100.0	14.9	26.3	9.6	6.2	20.0	15.2	7.7
West	100.0	12.0	21.5	8.1	6.6	25.5	18.2	8.0	100.0	16.3	23.6	8.8	9.2	24.3	13.2	4.6
Divisions:																
New England	100.0	12.0	20.7	7.1	5.1	26.6	19.2	9.3	100.0	13.2	17.0	7.5	11.0	33.3	12.7	5.4
Middle Atlantic	100.0	11.8	20.5	7.1	5.2	26.9	19.6	9.0	100.0	11.9	20.2	9.6	7.4	27.0	17.4	6.5
East North Central	100.0	12.6	21.7	7.3	5.7	25.6	17.8	9.2	100.0	10.9	19.0	8.7	7.8	27.0	18.4	8.2
West North Central	100.0	11.3	19.7	7.1	5.6	22.4	19.9	14.0	100.0	14.5	24.2	9.8	8.4	21.7	14.0	7.3
South Atlantic	100.0	11.6	21.4	8.6	7.1	26.7	17.3	7.2	100.0	15.0	26.6	9.7	6.5	21.6	14.4	6.3
East South Central	100.0	11.7	22.1	8.9	6.6	25.0	17.3	8.3	100.0	15.3	26.2	9.5	5.9	18.1	15.7	9.3
West South Central	100.0	11.0	21.0	8.2	6.0	23.7	19.8	10.3	100.0	14.4	25.9	9.6	5.7	18.0	16.7	9.6
Mountain	100.0	13.1	22.5	8.0	6.5	25.0	17.3	7.6	100.0	18.5	27.0	9.1	8.3	22.1	10.6	4.3
Pacific	100.0	11.4	21.0	8.1	6.7	25.8	18.6	8.2	100.0	13.5	19.3	8.3	10.3	27.2	16.4	4.9

Source: Appendix tables A-3, A-4, and A-5.

Table A-6.—Percent Distribution by Age of the White and Nonwhite Populations of the Rural and Urban Areas, by Regions and Divisions, for the Conterminous United States: 1960—Con.

Residence, region, and division	White								Nonwhite							
	All ages	Under 5 years	5 to 14 years	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 years and over	All ages	Under 5 years	5 to 14 years	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 years and over
URBAN																
Regions:																
Northeast	100.0	9.8	17.3	6.7	5.5	26.8	23.4	10.5	100.0	13.3	19.6	6.5	7.0	30.5	18.0	5.1
North Central	100.0	11.3	18.7	6.9	6.1	26.3	20.8	9.7	100.0	15.1	21.8	6.5	6.2	28.1	17.0	5.3
South	100.0	11.1	19.1	7.4	6.8	27.7	19.6	8.3	100.0	14.3	22.6	7.7	6.4	24.9	17.5	6.5
West	100.0	11.2	19.4	7.0	6.2	27.4	19.7	9.1	100.0	14.6	21.3	6.4	7.0	30.4	15.9	4.4
Divisions:																
New England	100.0	10.3	17.7	7.1	5.8	25.9	22.2	10.9	100.0	15.2	20.4	6.7	7.8	29.6	14.9	5.2
Middle Atlantic	100.0	9.7	17.2	6.6	5.4	27.0	23.8	10.3	100.0	13.1	19.5	6.5	6.9	30.6	18.3	5.1
East North Central	100.0	11.3	18.8	6.9	6.0	26.7	21.0	9.4	100.0	15.1	21.9	6.5	6.2	28.6	16.8	4.9
West North Central	100.0	11.4	18.7	7.1	6.5	25.2	20.3	10.7	100.0	15.1	21.1	6.8	6.2	25.3	18.0	7.5
South Atlantic	100.0	10.5	18.2	7.1	6.6	28.1	20.4	9.0	100.0	14.1	22.4	7.6	6.6	26.3	17.2	5.7
East South Central	100.0	11.0	18.9	7.6	7.0	27.6	19.5	8.4	100.0	14.2	23.1	7.8	6.1	22.5	18.4	7.8
West South Central	100.0	11.9	20.2	7.6	6.9	27.3	18.6	7.5	100.0	14.8	22.8	7.6	6.4	24.1	17.2	7.1
Mountain	100.0	12.5	21.1	7.6	6.7	26.6	17.7	7.8	100.0	16.3	22.4	7.1	7.7	27.2	14.4	5.0
Pacific	100.0	10.8	18.9	6.9	6.1	27.7	20.3	9.4	100.0	14.4	21.1	6.3	6.9	30.8	16.1	4.3

Source: Appendix tables A-3, A-4, and A-5.

Table A-7.—DEPENDENCY RATIOS FOR THE TOTAL DEPENDENT POPULATION AND ITS YOUTH AND AGED COMPONENTS, BY RURAL AND URBAN RESIDENCE AND COLOR, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Division and dependency	Dependency ratios[1]											
	Total			Rural farm			Rural nonfarm			Urban		
	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite
New England	88.2	88.1	89.5	101.5	101.4	[2]125.5	96.3	96.5	75.5	85.7	85.5	90.9
Youth	68.6	68.3	79.5	78.3	78.3	[2]91.1	78.1	78.3	66.1	65.8	65.3	80.9
Aged	19.6	19.9	10.0	23.1	23.1	[2]34.5	18.2	18.3	9.4	19.9	20.2	10.0
Middle Atlantic	80.9	81.0	79.7	101.3	101.4	85.0	93.7	93.8	93.2	78.1	77.9	79.1
Youth	63.4	62.7	70.4	80.2	80.2	75.5	76.4	76.3	80.7	60.6	59.5	70.0
Aged	17.5	18.3	9.3	21.1	21.2	[2]9.6	17.3	17.5	12.5	17.5	18.4	9.2
East North Central	91.1	90.9	93.5	103.1	103.0	108.7	102.7	103.0	88.1	87.1	86.4	93.7
Youth	73.8	72.9	83.8	81.5	81.5	87.4	84.2	84.4	72.7	70.5	68.9	84.2
Aged	17.3	18.0	9.8	21.5	21.5	[2]21.2	18.5	18.6	15.4	16.7	17.5	9.5
West North Central	97.6	97.2	106.3	100.5	100.2	146.9	109.1	108.8	126.2	92.6	92.0	102.3
Youth	76.1	75.5	90.8	83.8	83.5	129.7	80.2	79.5	109.7	72.4	71.5	87.0
Aged	21.5	21.7	15.5	16.7	16.7	17.2	29.0	29.2	16.5	20.2	20.5	15.3
South Atlantic	93.0	87.2	116.0	113.8	96.2	166.7	102.4	95.3	135.5	85.1	81.4	99.2
Youth	77.8	71.2	103.4	94.6	75.3	152.5	88.3	81.3	120.7	69.8	65.0	87.8
Aged	15.3	15.9	12.6	19.3	20.9	14.2	14.1	14.0	14.8	15.3	16.4	11.4
East South Central	101.3	93.7	132.6	113.4	98.9	173.6	111.5	104.2	151.6	90.9	84.7	112.7
Youth	84.1	76.8	114.1	92.8	77.8	154.9	93.6	87.2	128.3	75.2	69.3	96.2
Aged	17.2	16.9	18.6	20.6	21.1	18.7	17.9	17.0	23.3	15.7	15.5	16.5
West South Central	96.9	92.4	122.5	101.7	93.3	161.6	109.5	102.1	147.5	92.3	89.3	109.8
Youth	80.6	76.3	105.2	82.6	74.2	143.1	88.2	81.4	123.8	78.0	75.1	94.8
Aged	16.3	16.1	17.3	19.1	19.2	18.5	21.2	20.8	23.7	14.3	14.2	14.9
Mountain	100.0	98.9	124.2	108.0	105.5	150.3	107.6	104.6	143.7	96.5	96.3	103.2
Youth	85.0	83.7	113.7	94.1	91.6	138.0	92.5	89.1	133.1	81.4	81.0	93.0
Aged	15.0	15.2	10.6	13.9	14.0	12.4	15.1	15.5	10.6	15.1	15.3	10.2
Pacific	86.8	86.9	85.9	95.9	95.6	103.1	95.1	95.5	85.4	85.0	85.0	85.6
Youth	70.2	69.6	77.6	77.8	77.4	87.6	79.3	79.4	76.4	68.3	67.6	77.6
Aged	16.6	17.2	8.3	18.1	18.2	15.5	15.8	16.1	9.1	16.7	17.4	8.1

[1] Dependency ratios are defined as follows: "Youth dependency ratio" is the number of persons under 20 years per 100 persons aged 20 to 60 years; "Aged dependency ratio" is the number of persons 65 years old and over per 100 persons aged 20 to 64 years; "Total dependency ratio" is the sum of the youth and aged ratios.

[2] Based upon fewer than 1,000 persons in age group.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-8.—Percent Distribution of the White Population by Residence, Sex, and Distance From Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960

Age and sex	Inside SMSA counties			Distance from nearest SMSA[1]											
				Less than 50 miles			50 to 99 miles			100 to 149 miles			150 miles or more		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MALE															
Under 5 years	4.7	6.4	5.5	4.6	6.0	5.5	4.6	5.8	5.4	5.1	5.9	5.6	5.7	6.4	6.2
5 to 9 years	5.4	5.9	4.9	5.3	5.6	5.0	5.3	5.5	4.9	5.7	5.5	5.2	6.3	5.9	5.6
10 to 14 years	5.7	5.2	4.4	5.7	5.2	4.5	5.8	5.2	4.5	6.0	5.1	4.7	6.1	5.1	4.8
15 to 19 years	4.8	4.1	3.3	5.0	4.0	3.7	5.1	4.3	3.8	5.1	4.4	3.7	4.8	4.0	3.7
20 to 24 years	2.3	3.4	2.8	2.3	2.9	3.1	2.2	3.2	3.2	2.2	3.4	3.1	2.2	3.0	3.2
25 to 29 years	2.0	3.2	3.1	2.0	3.1	3.0	2.0	2.9	3.0	2.1	2.9	2.9	2.3	3.0	3.1
30 to 34 years	2.4	3.7	3.4	2.4	3.3	3.2	2.4	3.1	3.1	2.5	3.0	3.0	2.8	3.3	3.3
35 to 39 years	3.0	3.8	3.6	2.9	3.3	3.3	2.9	3.1	3.2	2.9	3.0	3.1	3.2	3.1	3.3
40 to 44 years	3.3	3.4	3.3	3.2	3.0	3.1	3.2	2.9	2.9	3.3	2.8	2.9	3.4	3.0	3.0
45 to 49 years	3.7	3.0	3.1	3.6	2.9	2.9	3.7	2.9	2.8	3.6	2.8	2.8	3.8	3.0	2.9
50 to 54 years	3.3	2.5	2.7	3.3	2.5	2.6	3.5	2.6	2.6	3.4	2.6	2.5	3.3	3.0	2.5
55 to 59 years	3.1	2.0	2.4	3.0	2.1	2.2	3.2	2.2	2.3	3.1	2.3	2.3	2.8	2.3	2.1
60 to 64 years	2.7	1.6	2.0	2.6	1.8	1.8	2.7	1.9	1.9	2.5	2.0	1.9	2.2	1.9	1.7
65 to 69 years	2.3	1.3	1.6	2.2	1.6	1.6	2.2	1.8	1.7	2.0	1.9	1.7	1.7	1.7	1.5
70 to 74 years	1.6	1.0	1.2	1.6	1.3	1.3	1.6	1.4	1.3	1.4	1.6	1.4	1.1	1.4	1.2
75 years and over	1.6	1.1	1.2	1.7	1.6	1.5	1.6	1.7	1.6	1.4	1.9	1.6	1.1	1.7	1.4
FEMALE															
Under 5 years	4.5	6.1	5.3	4.4	5.8	5.3	4.4	5.5	5.2	4.9	5.7	5.5	5.6	6.1	6.0
5 to 9 years	5.0	5.6	4.8	5.0	5.3	4.8	5.0	5.2	4.8	5.4	5.3	5.0	6.0	5.6	5.5
10 to 14 years	5.2	4.8	4.3	5.3	4.9	4.4	5.4	5.0	4.5	5.5	4.8	4.6	5.6	4.9	4.7
15 to 19 years	4.1	3.4	3.5	4.1	3.7	3.9	4.1	3.8	4.0	4.1	3.6	4.2	3.8	3.6	4.0
20 to 24 years	1.9	2.8	3.2	1.9	3.0	3.3	1.9	2.9	3.4	1.8	2.8	3.4	1.9	2.8	3.4
25 to 29 years	2.0	3.2	3.2	2.0	3.2	3.1	2.1	3.0	3.0	2.1	2.9	2.9	2.4	3.0	3.1
30 to 34 years	2.6	3.7	3.5	2.6	3.4	3.3	2.5	3.1	3.3	2.6	2.9	3.2	2.9	3.1	3.3
35 to 39 years	3.1	3.7	3.8	3.1	3.3	3.5	3.1	3.2	3.4	3.0	3.0	3.3	3.1	3.0	3.3
40 to 44 years	3.4	3.1	3.5	3.3	3.0	3.3	3.3	2.9	3.2	3.3	2.8	3.1	3.2	2.8	3.0
45 to 49 years	3.4	2.7	3.3	3.4	2.8	3.1	3.5	2.8	3.1	3.3	2.8	3.0	3.2	2.7	2.9
50 to 54 years	3.1	2.3	2.9	3.1	2.4	2.8	3.2	2.5	2.8	3.0	2.5	2.7	2.7	2.4	2.5
55 to 59 years	2.8	1.9	2.6	2.8	2.1	2.5	2.9	2.3	2.6	2.6	2.3	2.5	2.1	2.1	2.2
60 to 64 years	2.4	1.6	2.3	2.4	1.8	2.2	2.3	2.0	2.3	2.0	2.0	2.2	1.6	1.8	1.8
65 to 69 years	1.9	1.3	2.0	2.0	1.7	2.1	1.9	1.9	2.2	1.6	1.9	2.0	1.2	1.6	1.7
70 to 74 years	1.3	1.0	1.5	1.4	1.4	1.7	1.3	1.5	1.8	1.1	1.6	1.7	0.8	1.3	1.4
75 years and over	1.5	1.3	1.8	1.6	1.8	2.3	1.5	2.0	2.4	1.2	2.0	2.2	0.8	1.6	1.8

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-9.—PERCENT OF TOTAL POPULATION IN SELECTED AGE GROUPS BY DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, BY RURAL AND URBAN RESIDENCE AND COLOR, FOR THE CONTERMINOUS UNITED STATES: 1960

Residence, color, and age group	Total	Inside SMSA counties	Distance from nearest SMSA[1]			
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 miles or more
UNDER 5 YEARS						
White:						
Rural farm	9.3	9.1	9.0	8.9	10.0	11.4
Rural nonfarm	11.8	12.5	11.8	11.3	11.5	12.4
Urban	10.8	10.8	10.8	10.6	11.1	12.1
Nonwhite:						
Rural farm	14.8	13.3	14.0	14.9	15.9	17.3
Rural nonfarm	14.8	13.7	14.7	14.9	15.6	19.0
Urban	14.3	14.4	13.8	14.1	14.3	15.9
5 to 14 YEARS						
White:						
Rural farm	21.7	21.2	21.4	21.5	22.6	24.1
Rural nonfarm	21.2	21.5	21.1	20.9	20.7	21.5
Urban	18.6	18.4	18.8	18.7	19.5	20.5
Nonwhite:						
Rural farm	29.6	27.3	28.8	30.0	30.7	27.7
Rural nonfarm	25.7	23.2	25.8	26.3	26.7	27.2
Urban	21.6	21.3	22.9	23.4	23.4	22.0
15 to 19 YEARS						
White:						
Rural farm	9.1	8.8	9.1	9.2	9.2	8.6
Rural nonfarm	7.8	7.5	7.7	8.1	8.1	7.6
Urban	7.0	6.8	7.6	7.8	7.9	7.7
Nonwhite:						
Rural farm	11.7	11.2	11.8	11.9	11.2	10.6
Rural nonfarm	9.5	9.2	9.6	9.7	9.3	8.9
Urban	7.0	6.8	8.3	8.2	7.9	7.2
20 to 24 YEARS						
White:						
Rural farm	4.2	4.3	4.3	4.1	4.1	4.1
Rural nonfarm	6.1	6.2	5.9	6.1	6.1	5.9
Urban	6.1	6.0	6.4	6.6	6.5	6.6
Nonwhite:						
Rural farm	5.4	5.5	5.6	5.3	5.5	6.3
Rural nonfarm	6.5	8.0	6.3	6.0	6.7	7.9
Urban	6.6	6.7	6.4	5.9	6.1	8.3
25 to 44 YEARS						
White:						
Rural farm	21.7	21.8	21.6	21.5	21.9	23.5
Rural nonfarm	25.6	27.7	25.6	24.2	23.4	24.3
Urban	26.9	27.4	25.8	25.0	24.4	25.5
Nonwhite:						
Rural farm	16.4	18.2	16.4	16.1	17.2	19.8
Rural nonfarm	20.8	24.2	20.7	19.6	19.9	21.6
Urban	27.3	28.3	23.6	21.9	22.8	28.0
45 to 64 YEARS						
White:						
Rural farm	24.3	24.5	24.1	24.9	23.6	21.6
Rural nonfarm	18.6	17.5	18.5	19.1	19.3	19.2
Urban	21.1	21.3	20.1	20.4	19.9	18.5
Nonwhite:						
Rural farm	15.9	17.8	16.6	15.7	14.1	13.1
Rural nonfarm	15.2	15.4	15.4	15.4	14.6	10.8
Urban	17.3	17.2	17.4	18.2	17.9	14.0
65 YEARS AND OVER						
White:						
Rural farm	9.8	10.3	10.5	10.0	8.6	6.8
Rural nonfarm	9.1	7.1	9.3	10.3	10.9	9.4
Urban	9.5	9.2	10.5	10.9	10.6	9.0
Nonwhite:						
Rural farm	6.2	6.8	6.7	6.1	5.4	5.1
Rural nonfarm	7.5	6.2	7.6	8.1	7.1	4.6
Urban	5.8	5.3	7.7	8.3	7.6	4.6

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-10.—Dependency Ratios by Distance From Nearest Standard Metropolitan Statistical Area, by Residence and Color, for the Conterminous United States: 1960

Residence, color, and dependency	Total	In SMSA counties	Distance from nearest SMSA[1]			
			Less than 50 miles	50 to 99 miles	100 to 149 miles	150 miles or more
TOTAL DEPENDENCY RATIO						
Total	90.7	85.0	99.2	102.4	103.4	102.4
White	88.9	84.1	96.4	97.8	100.9	101.0
Nonwhite	106.4	92.9	129.6	138.7	139.1	138.2
Rural farm	105.4	100.2	104.6	107.0	106.5	105.1
White	99.4	97.9	99.8	98.4	101.6	103.5
Nonwhite	165.2	141.4	159.4	169.4	171.6	156.7
Rural nonfarm	102.6	95.3	103.3	107.2	107.9	106.2
White	99.6	94.5	100.0	102.6	105.1	103.6
Nonwhite	135.1	110.1	136.1	143.9	142.3	148.6
Urban	85.8	83.6	92.8	95.1	97.6	97.6
White	84.6	82.6	91.2	92.3	96.7	97.6
Nonwhite	95.2	91.7	111.0	117.2	113.8	98.7
YOUTH DEPENDENCY RATIO						
Total	73.4	69.2	[illegible]	81.9	83.0	85.1
White	71.1	67.5	76.7	77.1	80.2	83.4
Nonwhite	93.7	82.6	112.4	120.3	122.8	127.0
Rural farm	86.2	80.1	83.9	87.6	89.4	91.4
White	79.9	77.6	78.8	78.6	84.3	89.8
Nonwhite	148.8	124.9	141.9	153.1	157.0	141.7
Rural nonfarm	84.5	81.6	84.7	86.4	85.8	87.5
White	81.5	80.7	81.3	81.6	82.6	84.5
Nonwhite	117.6	97.1	118.1	124.1	125.1	137.0
Urban	68.9	67.5	73.0	74.4	76.9	80.0
White	67.0	65.7	71.1	71.2	75.7	79.8
Nonwhite	84.0	81.5	94.8	99.1	97.6	89.6
AGED DEPENDENCY RATIO						
Total	17.3	15.9	19.4	20.5	20.5	17.3
White	17.8	16.6	19.6	20.8	20.8	17.6
Nonwhite	12.6	10.1	17.2	18.5	16.3	11.2
Rural farm	19.2	20.1	20.7	19.4	17.2	13.8
White	19.5	20.3	21.0	19.8	17.3	13.9
Nonwhite	16.4	16.5	17.5	16.4	14.6	13.0
Rural nonfarm	18.1	13.7	18.6	20.8	22.0	18.6
White	18.2	13.7	18.7	20.9	22.4	19.1
Nonwhite	17.5	13.0	18.0	19.8	17.1	11.9
Urban	16.9	16.1	19.8	20.7	20.7	17.6
White	17.6	16.8	20.1	21.0	20.9	17.8
Nonwhite	11.2	10.2	16.2	18.1	16.2	9.1

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Computed from data in 1960 Census of Population.

Table A-11.—Sex Ratios for 5-Year Age Groups of the Rural and Urban Populations, by Color, for the Conterminous United States: 1960

Age	Males per 100 females							
	Total		Rural farm		Rural nonfarm		Urban	
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
All ages	97.3	94.2	108.0	101.6	103.1	102.3	94.3	91.3
Under 5 years	104.1	100.4	104.8	101.6	104.4	100.8	103.9	100.1
5 to 9 years	104.0	92.3	106.4	101.0	105.3	100.7	103.3	99.7
10 to 14 years	104.2	100.8	108.2	106.0	106.1	103.6	102.9	99.0
15 to 19 years	101.9	111.0	122.0	109.0	113.5	114.9	95.6	91.2
20 to 24 years	96.2	89.4	120.2	109.4	111.0	122.0	90.3	80.7
25 to 29 years	97.5	87.1	96.8	86.9	97.6	102.4	97.6	84.0
30 to 34 years	96.9	85.1	93.6	79.0	99.8	98.4	96.3	83.0
35 to 39 years	95.6	88.2	94.9	79.7	102.2	97.0	94.3	87.1
40 to 44 years	96.1	89.1	98.4	88.7	102.9	97.9	93.9	87.4
45 to 49 years	97.2	91.8	107.0	99.4	105.2	98.1	93.8	89.8
50 to 54 years	96.7	94.6	109.2	106.3	104.4	99.1	93.1	92.4
55 to 59 years	94.6	95.6	112.1	111.7	100.9	98.6	91.0	93.4
60 to 64 years	90.6	91.8	116.7	109.5	96.7	92.0	86.2	90.1
65 to 69 years	87.0	90.4	119.1	116.1	96.4	91.8	81.3	87.4
70 to 74 years	84.3	90.2	123.3	118.4	96.3	95.9	77.5	85.6
75 years and over	73.6	84.9	110.1	112.8	88.0	97.1	66.3	77.7

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—Selected Results of the Analysis of Factors Influencing the Number of Children Ever Born to Ever-Married White Women Aged 15 to 44 Per 1,000 Ever-Married Women Aged 15 to 44

1. Rural-Farm Population of the Conterminous United States: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3519.0371	78.0586	-
Percent of the male employed work force who are farmers and farm managers	[1]-.1311	.0503	-.0511
Percent of the male employed work force who are farm laborers and farm foremen	[1].7446	.1063	.1362
Percent of females 14 years and over who are employed	[1]-.6166	.1631	-.0925
Median female personal income	[1]-.0221	.0077	-.0709
Median years of school completed by males and females 25 years and over	[1]-7.8181	.6130	-.2676
Median family income	[1].0128	.0012	.2292
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.5904	.1605	-.1903
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].3839	.1237	.0599
Proximity to metropolitan centers	[1]-14.3440	1.2463	-.2540
Multiple correlation coefficient		.4070	
Standard error of estimate		355.3657	

- Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

2. Rural-Nonfarm Population of the Conterminous United States: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3134.1552	76.1336	-
Percent of the male employed work force who are farmers and farm managers	-.0969	.1185	-.0149
Percent of the male employed work force who are farm laborers and farm foremen	[1]1.2998	.1017	.2203
Percent of females 14 years and over who are employed	[1]-1.2831	.1207	-.2393
Median female personal income	-.0064	.0053	-.0261
Median years of school completed by males and females 25 years and over	[1]-4.8740	.4329	-.2037
Median family income	[1].0092	[illegible]	.2235
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.2333	.1214	-.1716
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].3622	.1228	.0485
Proximity to metropolitan centers	[1]-14.8125	.9049	-.3139

Multiple correlation coefficient .5211

Standard error of estimate 268.6885

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

3. Urban Population of the Conterminous United States: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]2444.0622	105.4912	-
Percent of the male employed work force who are farmers and farm managers	-.1489	.3120	-.0098
Percent of the male employed work force who are farm laborers and farm foremen	[1]3.9243	.2648	.2985
Percent of females 14 years and over who are employed	-.2229	.1436	-.0425
Median female personal income	[1]-.0297	.0049	-.1600
Median years of school completed by males and females 25 years and over	[1]-2.2003	.4673	-.0912
Median family income	[1].0052	.0011	.0920
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-2.1718	.1243	-.3424
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].7910	.1466	.1014
Proximity to metropolitan centers	[1]-10.0066	.8392	-.2565

Multiple correlation coefficient .5810

Standard error of estimate 233.0239

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

4. Rural-Farm Population of the Northeast Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4121.5466	547.9140	-
Percent of the male employed work force who are farmers and farm managers	-.2594	.3612	-.0590
Percent of the male employed work force who are farm laborers and farm foremen	[1]1.6875	.5137	.2573
Percent of females 14 years and over who are employed	1.0565	.9721	.1430
Median female personal income	[1]-.0534	.0269	-.2743
Median years of school completed by males and females 25 years and over	-1.5400	2.5366	-.0474
Median family income	[1]-.0185	.0077	-.2014
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.6277	.6518	-.1874
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	-.6719	.4232	-.1128
Proximity to metropolitan centers	[1]-18.0111	3.8722	-.3692

Multiple correlation coefficient .5318

Standard error of estimate 296.2525

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

5. Rural-Nonfarm Population of the Northeast Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3320.6994	699.8082	-
Percent of the male employed work force who are farmers and farm managers	-1.5160	1.3482	-.0876
Percent of the male employed work force who are farm laborers and farm foremen	[1]3.2775	.8541	.3040
Percent of females 14 years and over who are employed	[1]-.7139	.3840	-.1719
Median female personal income	-.0052	.0105	-.0477
Median years of school completed by males and females 25 years and over	.1610	1.1324	.0087
Median family income	[1]-.6586	.0023	-.1861
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	-.1928	.3804	-.0365
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	-.3985	.4273	-.0523
Proximity to metropolitan centers	[1]-11.1990	1.7997	-.4290

Multiple correlation coefficient .6747

Standard error of estimate 142.4794

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A–12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

6. Urban Population of the Northeast Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3506.2302	710.7050	-
Percent of the male employed work force who are farmers and farm managers	[1]-3.3615	1.9545	-.1256
Percent of the male employed work force who are farm laborers and farm foremen	[1]3.3362	1.7403	.1638
Percent of females 14 years and over who are employed	.3245	.3704	.0876
Median female personal income	[1]-.0320	.0095	-.3598
Median years of school completed by males and females 25 years and over	.1227	1.1245	.0065
Median family income	[1]-.0189	.0029	-.5007
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-.9790	.3502	-.1963
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	.2837	.3882	.0459
Proximity to metropolitan centers	[1]-7.6358	1.5350	-.3496

Multiple correlation coefficient	.6136
Standard error of estimate	134.8544

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

7. Rural-Farm Population of the North Central Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4083.5405	246.0734	-
Percent of the male employed work force who are farmers and farm managers	[1]-.4286	.1025	-.1653
Percent of the male employed work force who are farm laborers and farm foremen	[1]1.9118	.2206	.2493
Percent of females 14 years and over who are employed	[1].7939	.2708	.1006
Median female personal income	[1]-.0603	.0136	-.1552
Median years of school completed by males and females 25 years and over	[1]-11.3734	.8632	-.3614
Median family income	[1].0061	.0026	.0838
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-2.5796	.2722	-.2615
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	.2279	.2119	[illegible]
Proximity to metropolitan centers	[1]-18.4918	2.1472	-.3214

Multiple correlation coefficient	.5650
Standard error of estimate	311.0129

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

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Table A-12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

8. Rural-Nonfarm Population of the North Central Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3457.1062	328.9808	-
Percent of the male employed work force who are farmers and farm managers	[1]-.7891	.2121	-.1527
Percent of the male employed work force who are farm laborers and farm foremen	.0445	.2932	.0051
Percent of females 14 years and over who are employed	[1].3709	.2069	.0690
Median female personal income	[1]-.0300	.0097	-.1157
Median years of school completed by males and females 25 years and over	[1]-6.3387	.7509	-.2622
Median family income	-.0010	.0016	-.0232
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.3453	.1936	-.2067
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].3874	.1813	.0653
Proximity to metropolitan centers	[1]-11.0841	1.5321	-.2825

Multiple correlation coefficient	.4324
Standard error of estimate	229.5279

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

9. Urban Population of the North Central Region: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]2760.7961	444.5181	-
Percent of the male employed work force who are farmers and farm managers	-.6193	.6133	-.0395
Percent of the male employed work force who are farm laborers and farm foremen	-.6827	.8570	-.0297
Percent of females 14 years and over who are employed	[1].5828	.2747	.0969
Median female personal income	[1]-.0561	.0102	-.2629
Median years of school completed by males and females 25 years and over	-.1311	.8178	-.0053
Median family income	.0017	.0023	.0250
Pe[illegible] of ever-married women aged 15 to 44, who are aged 15 [illegible]	[1]-2.9280	.2114	-.4553
[illegible]t of ever-married women, aged 15 to 44, who are aged 25 to 34	.2660	.2430	.0364
Proximity to metropolitan centers	[1]-13.1677	1.4122	-.3369

Multiple correlation coefficient	.6008
Standard error of estimate	201.2148

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—Selected Results of the Analysis of Factors Influencing the Number of Children Ever Born to Ever-Married White Women Aged 15 to 44 Per 1,000 Ever-Married Women Aged 15 to 44—Con.

10. Rural-Farm Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4581.8297	206.5822	–
Percent of the male employed work force who are farmers and farm managers	[1]-.7531	.0800	-.2436
Percent of the male employed work force who are farm laborers and farm foremen	[1].6980	.1424	.1315
Percent of females 14 years and over who are employed	[1]-1.3375	.2099	-.2320
Median female personal income	.3776	.0112	.0225
Median years of school completed by males and females 25 years and over	[1]-10.2203	.9629	-.2898
Median family income	[1]-.0068	.0028	-.0734
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-.5981	.2090	-.0776
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	.2093	.1611	.0338
Proximity to metropolitan centers	[1]-13.0803	2.4206	-.1640

Multiple correlation coefficient .5021

Standard error of estimate 334.8846

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

11. Rural-Nonfarm Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4016.7090	254.8230	–
Percent of the male employed work force who are farmers and farm managers	[1]-.8059	.1718	-.1 05
Percent of the male employed work force who are farm laborers and farm foremen	[1]1.5150	.1321	.2728
Percent of females 14 years and over who are employed	[1]-1.7770	.1532	-.3646
Median female personal income	.0073	.0078	.0276
Median years of school completed by males and females 25 years and over	[1]-8.1452	.6190	-.3057
Median family income	[1]-.0033	.0013	-.0996
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.2563	.1706	-.1613
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].3512	.1726	.0646
Proximity to metropolitan centers	[1]-13.3798	1.6029	-.1982

Multiple correlation coefficient .6449

Standard error of estimate 252.6118

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

12. Urban Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]2755.2149	405.6911	-
Percent of the male employed work force who are farmers and farm managers	-.2353	.3298	-.0183
Percent of the male employed work force who are farm laborers and farm foremen	[1]3.9038	.2941	.3174
Percent of females 14 years and over who are employed	[1]-.6414	.1507	-.1505
Median female personal income	[1]-.0097	.0058	-.0574
Median years of school completed by males and females 25 years and over	[1]-5.0256	.5396	-.2456
Median family income	.0008	.0013	.0189
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.4845	.1447	-.2483
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1]1.0502	.1449	.1532
Proximity to metropolitan centers	[1]-11.4618	1.3149	-.2260

Multiple correlation coefficient .7219

Standard error of estimate 191.3906

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

13. Rural-Farm Population of the West: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]6285.7973	577.0558	-
Percent of the male employed work force who are farmers and farm managers	[1]-.4636	.1784	-.1532
Percent of the male employed work force who are farm laborers and farm foremen	.1639	.2575	.0359
Percent of females 14 years and over who are employed	-.8896	.5898	-.0987
Median female personal income	[1]-.0422	.0232	-.1247
Median years of school completed by males and females 25 years and over	-.7740	2.3452	-.0181
Median family income	[1]-.0538	.0199	-.1961
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-2.2488	.4601	-.2851
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	-.1327	.3764	-.0197
Proximity to metropolitan centers	[1]-13.6219	4.9109	-.2158

Multiple correlation coefficient .4847

Standard error of estimate 370.5576

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-12.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED WHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—CON.

14. Rural-Nonfarm Population of the West: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]7125.2608	556.0705	–
Percent of the male employed work force who are farmers and farm managers	[1]1.3628	.2806	.2080
Percent of the male employed work force who are farm laborers and farm foremen	.1022	.2260	.0200
Percent of females 14 years and over who are employed	[1]-1.2838	.4066	-.1719
Median female personal income	-.0095	.0145	-.0391
Median years of school completed by males and females 25 years and over	[1]-11.7449	1.5722	-.3677
Median family income	[1]-.0511	.0137	-.1777
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.0520	.3136	-.1322
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	-.0964	.3182	.0115
Proximity to metropolitan centers	[1]-8.3333	3.0893	-.1349

Multiple correlation coefficient	.6667
Standard error of estimate	285.6378

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

15. Urban Population of the West: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4344.9582	821.2580	–
Percent of the male employed work force who are farmers and farm managers	[1]4.7762	.6579	.3365
Percent of the male employed work force who are farm laborers and farm foremen	-.6801	.4279	-.0724
Percent of females 14 years and over who are employed	.0041	.3882	.0008
Median female personal income	[1]-.0416	.0105	-.2225
Median years of school completed by males and females 25 years and over	[1]-14.9833	1.6579	-.4294
Median family income	-.0023	.0073	-.0172
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.5866	.2837	-.2408
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1].9630	.3435	.1160
Proximity to metropolitan centers	[1]-11.2896	2.4179	-.2799

Multiple correlation coefficient	.7874
Standard error of estimate	180.1092

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-13.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED NONWHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44

1. Rural-Farm Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]7627.5366	254.1864	-
Percent of the male employed work force who are farmers and farm managers	-.2580	.3299	-.0513
Percent of the male employed work force who are farm laborers and farm foremen	-.0710	.2694	-.0168
Percent of females 14 years and over who are employed	-.5737	.4924	-.0729
Median female personal income	-.0268	.0438	-.0640
Median years of school completed by males and females 25 years and over	[1]-13.6931	3.7872	-.2016
Median family income	[1]-.0631	.0157	-.2973
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-3.0643	.5747	-.2925
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1]-1.3651	.5066	-.1365
Proximity to metropolitan centers	-11.8685	11.4937	-.0753

Multiple correlation coefficient .4958

Standard error of estimate 589.4096

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

2. Rural-Nonfarm Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]6111.3049	134.7897	-
Percent of the male employed work force who are farmers and farm managers	[1].5907	.2952	.0628
Percent of the male employed work force who are farm laborers and farm foremen	.2120	.1373	.0505
Percent of females 14 years and over who are employed	[1]-.0013	.0007	-.0578
Median female personal income	[1]-.0926	.0399	-.0767
Median years of school completed by males and females 25 years and over	[1]-1.9427	1.6171	-.4081
Median family income	[1]-.0313	.0067	-.2501
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.8788	.3227	-.1810
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	[1]-.6353	.2876	-.0683
Proximity to metropolitan centers	-2.2444	3.2088	-.0250

Multiple correlation coefficient .5995

Standard error of estimate 472.8715

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-13.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING THE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED NONWHITE WOMEN AGED 15 TO 44 PER 1,000 EVER-MARRIED WOMEN AGED 15 TO 44—Continued

3. Urban Population of the South: 1960

Independent variable	Partial regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4966.0001	206.1703	-
Percent of the male employed work force who are farmers and farm managers	[1]3.1968	1.1195	.0980
Percent of the male employed work force who are farm laborers and farm foremen	.1985	.3123	.0218
Percent of females 14 years and over who are employed	[1].0020	.0006	.1107
Median female personal income	[1]-.0883	.0286	-.1110
Median years of school completed by males and females 25 years and over	[1]-15.5267	1.4306	-.3832
Median family income	[1]-.0184	.0031	-.2167
Percent of ever-married women, aged 15 to 44, who are aged 15 to 24	[1]-1.6370	.3285	-.1762
Percent of ever-married women, aged 15 to 44, who are aged 25 to 34	.0327	.2782	.0039
Proximity to metropolitan centers	-2.8391	2.8570	-.0387

Multiple correlation coefficient .... .5656

Standard error of estimate 418.1851

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-14.—Percent Enrolled in School, by Age Groups for the Rural and Urban Populations, by Divisions, for the Conterminous United States: 1960

Division and residence	Percent enrolled by age group					
	5 and 6 years old	7 to 13 years old	14 and 15 years old	16 and 17 years old	18 and 19 years old	20 to 34 years old
NEW ENGLAND						
Rural farm	55.5	98.5	94.7	82.6	41.3	3.8
Rural nonfarm	61.4	97.7	94.4	81.6	40.0	5.2
Urban	74.7	97.7	95.0	80.6	48.9	10.0
MIDDLE ATLANTIC						
Rural farm	65.9	98.3	93.8	80.4	31.1	2.7
Rural nonfarm	68.3	97.9	94.5	81.7	34.6	4.1
Urban	77.7	97.5	94.8	82.1	42.5	8.5
EAST NORTH CENTRAL						
Rural farm	52.0	98.1	95.8	86.2	35.2	2.9
Rural nonfarm	58.8	97.8	94.7	82.4	35.2	3.9
Urban	77.3	98.0	95.4	83.4	44.2	8.1
WEST NORTH CENTRAL						
Rural farm	56.7	98.2	95.7	88.3	38.5	3.8
Rural nonfarm	59.7	97.6	94.8	83.4	35.0	5.0
Urban	75.7	98.2	95.5	84.1	50.3	10.2
SOUTH ATLANTIC						
Rural farm	38.8	95.7	89.4	73.7	36.0	3.8
Rural nonfarm	41.8	96.3	89.6	70.2	30.2	4.3
Urban	54.1	97.5	93.6	78.6	43.4	7.9
EAST SOUTH CENTRAL						
Rural farm	42.0	96.0	89.3	74.7	39.1	5.3
Rural nonfarm	41.9	96.0	89.6	71.5	33.6	5.7
Urban	48.0	97.1	93.2	79.4	47.4	9.6
WEST SOUTH CENTRAL						
Rural farm	36.2	96.5	92.5	82.4	46.3	5.8
Rural nonfarm	38.4	96.6	91.6	78.2	37.7	5.8
Urban	47.0	97.3	93.1	77.8	45.2	8.8
MOUNTAIN						
Rural farm	42.6	97.2	95.1	88.3	48.7	5.7
Rural nonfarm	51.4	96.5	93.6	83.2	39.5	6.8
Urban	61.5	98.1	95.6	84.4	51.3	11.5
PACIFIC						
Rural farm	58.7	98.3	97.2	89.5	50.2	5.8
Rural nonfarm	65.1	97.9	95.9	81.3	31.9	6.0
Urban	79.8	98.4	96.5	85.3	45.2	10.3

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-15.—PERCENT OF PERSONS 25 YEARS OLD AND OVER BY YEARS OF SCHOOL COMPLETED, BY RESIDENCE, COLOR, AND SEX, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960

Region, residence, color and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
NORTHEAST										
Rural Farm										
White:										
Male	100.0	1.5	3.9	7.6	8.9	30.3	17.5	20.2	5.6	4.6
Female	100.0	1.4	2.5	5.1	5.7	26.0	18.1	27.5	9.1	4.7
Nonwhite:										
Male	[1]100.0	7.6	25.5	20.5	10.4	13.7	12.5	5.3	2.5	2.2
Female	[1]100.0	3.5	12.5	17.5	12.2	17.4	18.2	13.9	3.5	1.3
Rural Nonfarm										
White:										
Male	100.0	1.6	3.8	6.9	7.8	22.1	19.9	22.1	6.8	8.9
Female	100.0	1.5	2.7	5.4	5.8	20.4	19.8	30.4	8.5	5.4
Nonwhite:										
Male	100.0	5.5	14.9	14.0	8.8	16.2	20.0	13.1	3.8	3.7
Female	100.0	3.8	10.7	12.3	9.4	17.0	20.8	18.6	4.3	3.3
Urban										
White:										
Male	100.0	2.8	4.1	6.6	6.1	17.9	20.6	21.6	8.4	11.9
Female	100.0	3.3	3.8	6.2	5.3	18.9	19.8	29.0	7.6	6.0
Nonwhite:										
Male	100.0	3.6	11.1	12.4	8.3	15.9	22.7	16.8	5.1	4.1
Female	100.0	2.5	8.4	11.2	8.0	15.7	24.9	21.5	4.6	3.2
NORTH CENTRAL										
Rural Farm										
White:										
Male	100.0	0.6	4.3	6.6	8.5	37.2	13.5	22.9	4.3	2.1
Female	100.0	0.4	2.3	4.3	5.3	30.3	15.0	30.0	9.7	2.7
Nonwhite:										
Male	[2]100.0	6.5	23.2	15.4	10.7	20.7	12.5	8.1	2.1	0.7
Female	[2]100.0	4.0	13.3	16.5	9.2	22.7	14.5	14.0	4.3	1.6
Rural Nonfarm										
White:										
Male	100.0	1.3	5.3	6.9	7.7	26.1	17.5	22.9	6.1	6.7
Female	100.0	1.0	3.5	5.5	5.8	24.4	18.7	29.1	8.2	[illegible]
Nonwhite:										
Male	100.0	4.9	15.7	14.1	8.7	17.9	20.9	12.0	3.5	2.3
Female	100.0	4.0	11.9	13.4	9.2	19.8	20.2	15.0	4.3	2.1
Urban										
White:										
Male	100.0	1.2	3.9	5.7	5.7	19.6	19.4	23.7	9.7	11.2
Female	100.0	1.2	3.2	5.1	4.7	19.8	19.8	30.6	9.4	6.2
Nonwhite:										
Male	100.0	3.0	13.4	12.3	8.3	16.3	22.5	14.9	5.7	3.7
Female	100.0	2.0	9.1	10.8	7.9	16.2	25.5	19.2	6.1	3.2

[1] Less than 2,000 persons.

[2] Less than 8,000 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-15.—PERCENT OF PERSONS 25 YEARS OLD AND OVER BY YEARS OF SCHOOL COMPLETED, BY RESIDENCE, COLOR, AND SEX, BY REGIONS, FOR THE CONTERMINOUS UNITED STATES: 1960—Con.

Region, residence, color, and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
SOUTH										
Rural Farm										
White:										
Male	100.0	3.4	15.5	15.2	12.1	18.4	15.7	13.1	3.9	2.6
Female	100.0	2.0	9.1	12.9	11.4	18.7	18.8	18.0	5.8	3.3
Nonwhite:										
Male	100.0	12.2	42.1	19.6	8.7	7.2	6.2	2.5	0.7	0.6
Female	100.0	6.9	26.4	23.1	13.2	11.5	11.6	4.6	1.3	1.6
Rural Nonfarm										
White:										
Male	100.0	3.3	13.2	13.2	10.1	15.2	17.2	16.6	5.7	5.6
Female	100.0	2.3	9.0	12.1	9.8	15.4	19.8	21.4	6.3	3.9
Nonwhite:										
Male	100.0	12.3	35.5	18.0	8.9	8.0	9.4	4.9	1.5	1.5
Female	100.0	8.0	25.6	20.2	11.7	10.5	13.4	6.5	1.7	2.4
Urban										
White:										
Male	100.0	1.9	6.1	7.8	6.5	12.4	18.5	22.2	11.3	13.4
Female	100.0	1.8	4.8	7.2	5.9	12.2	19.9	29.2	11.3	7.7
Nonwhite:										
Male	100.0	6.8	23.6	16.6	9.0	10.9	15.8	9.9	3.9	3.6
Female	100.0	4.7	17.5	15.9	9.8	12.2	19.5	12.4	3.8	4.4
WEST										
Rural Farm										
White:										
Male	100.0	1.9	5.5	6.0	6.3	25.2	18.0	23.9	8.5	4.7
Female	100.0	1.2	3.2	4.0	4.0	18.2	20.2	31.2	12.7	5.4
Nonwhite:										
Male	[1]100.0	20.4	14.4	9.2	5.5	12.0	11.9	19.9	4.6	2.2
Female	[1]100.0	24.8	9.1	9.7	3.9	12.4	11.9	22.4	4.4	1.4
Rural Nonfarm										
White:										
Male	100.0	2.3	5.8	5.8	6.0	19.6	19.9	23.3	9.1	8.2
Female	100.0	1.4	3.5	4.6	4.5	16.5	22.0	30.6	11.2	5.7
Nonwhite:										
Male	100.0	13.9	14.8	10.8	6.2	13.3	19.0	15.1	4.5	2.4
Female	100.0	18.2	10.3	10.5	6.7	13.2	17.8	16.5	4.7	2.0
Urban										
White:										
Male	100.0	1.4	3.4	4.4	4.3	14.5	19.3	25.4	13.8	13.6
Female	100.0	1.3	2.8	3.8	3.5	13.7	20.0	33.2	13.7	8.0
Nonwhite:										
Male	100.0	4.2	8.9	9.1	6.5	12.3	20.3	20.8	10.7	7.1
Female	100.0	3.4	6.5	8.4	6.0	12.4	22.0	25.9	10.4	5.1

[1] Less than 2,000 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-16.—Percent of Persons 25 Years Old and Over, by Years of School Completed, by Residence, Color, and Sex, by Divisions, for the Conterminous United States: 1960

Division, residence, color, and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
NEW ENGLAND										
Rural Farm										
White: Male	100.0	2.1	3.7	6.5	6.3	27.4	19.0	21.2	7.1	6.6
Female	100.0	1.7	2.3	4.2	3.8	21.5	18.7	29.9	11.9	5.9
Nonwhite: Male	[1]100.0	7.0	13.2	7.9	11.4	13.2	21.1	12.3	10.5	3.5
Female	[1]100.0	8.9	6.7	11.2	15.1	13.4	11.2	18.4	10.6	4.5
Rural Nonfarm										
White: Male	100.0	1.5	2.8	5.5	6.3	19.8	20.4	23.7	8.6	11.3
Female	100.0	1.4	2.1	4.1	4.5	17.0	19.6	33.1	11.4	6.8
Nonwhite: Male	100.0	5.3	6.1	8.8	6.9	18.1	23.5	20.3	5.7	5.4
Female	100.0	4.7	4.5	6.7	7.3	19.4	20.7	24.0	7.7	5.1
Urban										
White: Male	100.0	2.6	3.7	6.7	6.4	17.5	20.5	23.1	8.3	11.1
Female	100.0	2.9	3.4	6.1	5.5	17.3	19.2	30.7	9.0	5.9
Nonwhite: Male	100.0	3.6	8.6	11.0	7.7	15.9	22.7	18.7	5.9	5.9
Female	100.0	2.4	6.4	9.6	7.9	15.2	24.8	24.2	5.7	3.9
MIDDLE ATLANTIC										
Rural Farm										
White: Male	100.0	1.4	3.9	7.8	9.6	31.0	17.2	19.9	5.2	4.1
Female	100.0	1.3	2.6	5.3	6.2	27.1	17.9	26.8	8.4	4.3
Nonwhite: Male	[2]100.0	7.6	26.3	21.3	10.3	13.8	11.9	4.8	2.0	2.1
Female	[2]100.0	2.8	13.2	18.3	11.9	17.9	19.0	13.4	2.6	0.9
Rural Nonfarm										
White: Male	100.0	1.6	4.2	7.5	8.4	23.0	19.7	21.5	6.1	8.0
Female	100.0	1.5	3.0	6.0	6.4	21.8	19.9	29.3	7.3	4.8
Nonwhite: Male	100.0	5.5	16.6	15.0	9.2	15.8	19.3	11.7	3.4	3.4
Female	100.0	3.6	11.7	13.3	9.7	16.6	20.8	17.7	3.7	3.0
Urban										
White: Male	100.0	2.9	4.2	6.6	6.0	18.1	20.6	21.2	8.4	12.1
Female	100.0	3.4	3.9	6.3	5.3	19.4	20.0	28.5	7.2	6.1
Nonwhite: Male	100.0	3.6	11.4	12.5	8.3	15.9	22.7	16.7	5.0	4.0
Female	100.0	2.5	8.6	11.3	8.0	15.7	24.9	21.3	4.5	3.1
EAST NORTH CENTRAL										
Rural Farm										
White: Male	100.0	0.8	4.5	7.0	8.4	34.5	14.6	23.4	4.3	2.5
Female	100.0	0.5	2.5	4.7	5.6	29.7	16.2	29.5	8.3	2.9
Nonwhite: Male	[3]100.0	3.0	19.8	14.5	10.0	23.8	14.6	11.1	2.8	0.5
Female	[3]100.0	2.3	11.3	13.1	7.8	24.6	16.8	18.4	4.2	1.6
Rural Nonfarm										
White: Male	100.0	1.3	4.9	6.9	7.6	24.5	19.1	23.8	6.0	6.1
Female	100.0	0.9	3.2	5.4	5.7	23.2	20.2	30.4	7.3	3.7
Nonwhite: Male	100.0	4.8	15.5	13.5	8.4	17.8	22.5	11.5	3.7	2.3
Female	100.0	3.9	10.9	12.8	8.7	20.6	21.4	15.3	4.3	2.2
Urban										
White: Male	100.0	1.4	4.0	5.9	5.7	19.0	20.4	23.4	9.3	10.9
Female	100.0	1.4	3.3	5.4	4.8	19.5	20.7	30.3	8.6	6.0
Nonwhite: Male	100.0	2.9	13.4	12.3	8.3	16.2	22.9	14.8	5.7	3.6
Female	100.0	2.0	9.0	10.8	7.9	16.2	25.8	19.3	6.1	3.0

[1] Less than 200 persons.

[2] Less than 2,000 persons.

[3] Less than 8,000 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-16.—PERCENT OF PERSONS 25 YEARS OLD AND OVER, BY YEARS OF SCHOOL COMPLETED, BY RESIDENCE, COLOR, AND SEX, BY DIVISIONS, FOR THE CONTERMINOUS UNITED STATES: 1960—Con.

Division, residence, color, and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
WEST NORTH CENTRAL										
Rural Farm										
White: Male	100.0	0.5	4.0	6.3	8.7	39.7	12.4	22.5	4.3	1.7
Female	100.0	0.3	2.2	3.9	5.0	30.9	13.8	30.4	11.1	2.4
Nonwhite: Male	[1]100.0	8.4	25.1	15.9	11.1	19.0	11.4	6.5	1.8	0.8
Female	100.0	4.9	14.3	18.3	9.9	21.7	13.2	11.7	4.3	1.6
Rural Nonfarm										
White: Male	100.0	1.2	6.0	7.0	8.0	29.2	14.5	21.2	6.3	6.6
Female	100.0	1.0	4.2	5.7	6.1	26.8	15.8	26.7	9.9	3.8
Nonwhite: Male	100.0	5.0	16.0	15.3	8.9	18.1	18.0	13.0	3.2	2.5
Female	100.0	4.3	13.5	14.3	10.0	18.6	18.5	14.6	4.3	1.9
Urban										
White: Male	100.0	0.8	3.4	5.0	5.6	21.3	16.8	24.5	10.6	12.0
Female	100.0	0.7	2.6	4.4	4.6	20.5	17.2	31.5	11.7	6.8
Nonwhite: Male	100.0	3.3	13.4	11.9	8.4	16.8	20.5	15.3	6.0	4.5
Female	100.0	2.1	9.6	10.7	8.2	16.5	23.8	18.9	6.4	3.9
SOUTH ATLANTIC										
Rural Farm										
White: Male	100.0	3.1	15.3	16.9	15.0	13.1	15.5	14.0	4.1	3.0
Female	100.0	1.6	8.9	13.7	14.3	13.4	18.0	19.7	6.6	3.8
Nonwhite: Male	100.0	12.1	43.3	19.6	9.4	5.3	6.3	2.6	0.7	0.6
Female	100.0	6.6	26.3	23.1	14.8	9.0	11.7	5.7	1.2	1.6
Rural Nonfarm										
White: Male	100.0	2.6	12.2	13.5	11.1	13.3	17.5	17.6	5.9	6.2
Female	100.0	1.8	8.2	12.0	10.7	13.3	19.6	23.3	6.9	4.3
Nonwhite: Male	100.0	11.3	35.2	18.5	9.9	7.2	9.6	5.3	1.4	1.6
Female	100.0	7.1	25.1	20.1	12.9	9.2	13.8	7.5	1.7	2.7
Urban										
White: Male	100.0	1.3	5.1	7.7	6.8	12.3	18.8	22.4	11.1	14.4
Female	100.0	1.2	3.9	7.0	6.1	12.1	19.7	30.0	11.8	8.2
Nonwhite: Male	100.0	6.2	23.4	16.8	9.1	10.0	16.2	10.4	3.9	4.0
Female	100.0	4.2	17.4	16.2	10.0	11.1	19.5	12.9	4.0	4.7
EAST SOUTH CENTRAL										
Rural Farm										
White: Male	100.0	3.1	17.7	15.3	10.5	23.6	14.1	10.7	3.1	2.0
Female	100.0	1.6	9.9	13.6	10.2	25.1	17.6	14.7	4.7	2.6
Nonwhite: Male	100.0	11.6	42.1	20.5	7.9	9.2	5.6	2.0	0.6	0.5
Female	100.0	6.3	26.9	24.1	11.5	14.2	11.3	3.1	1.3	1.3
Rural Nonfarm										
White: Male	100.0	3.2	15.1	13.5	9.0	18.9	15.9	14.7	5.0	4.7
Female	100.0	2.1	10.5	12.9	9.0	19.8	18.8	18.1	5.5	3.3
Nonwhite: Male	100.0	12.8	37.5	18.0	7.2	9.2	8.6	4.2	1.3	1.4
Female	100.0	7.9	26.5	21.3	9.9	12.9	12.8	5.0	1.6	2.0
Urban										
White: Male	100.0	1.3	6.1	8.0	6.3	15.1	18.8	22.5	10.3	11.6
Female	100.0	0.9	4.6	7.4	5.8	15.2	20.6	28.5	10.1	6.7
Nonwhite: Male	100.0	7.5	25.7	17.1	8.4	12.4	14.5	8.6	3.1	2.9
Female	100.0	4.8	18.8	16.6	9.2	14.1	19.1	10.6	3.1	3.7

[1] Less than 8,000 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A–16.—Percent of Persons 25 Years Old and Over, by Years of School Completed, by Residence, Color, and Sex, by Divisions, for the Conterminous United States: 1960—Con.

Division, residence, color, and sex	Persons 25 years old and over	Years of school completed								
		None	Elementary school				High school		College	
			1 to 4	5 to 6	7	8	1 to 3	4	1 to 3	4 or more
WEST SOUTH CENTRAL										
Rural Farm										
White: Male	100.0	4.1	13.4	13.1	10.4	18.8	17.8	14.8	4.8	2.8
Female	100.0	3.0	8.2	11.0	9.3	17.7	21.2	19.7	6.3	3.5
Nonwhite: Male	100.0	13.7	38.9	18.0	8.5	8.6	7.2	3.3	1.1	0.6
Female	100.0	8.9	25.3	21.1	12.1	12.6	12.1	4.5	1.5	2.0
Rural Nonfarm										
White: Male	100.0	4.7	13.5	12.2	9.2	15.3	17.8	16.4	5.8	5.2
Female	100.0	3.7	9.3	11.3	8.8	15.1	21.2	20.7	6.0	3.8
Nonwhite: Male	100.0	14.0	34.6	16.9	8.3	8.7	9.6	4.7	1.7	1.5
Female	100.0	10.0	25.7	19.4	10.7	11.1	12.9	5.9	1.8	2.4
Urban										
White: Male	100.0	2.8	7.3	7.8	6.2	11.1	18.0	21.8	12.1	12.9
Female	100.0	3.0	6.0	7.4	5.6	10.8	19.8	28.6	11.3	7.5
Nonwhite: Male	100.0	7.5	22.3	15.8	9.1	11.3	16.3	10.1	4.3	3.4
Female	100.0	5.5	16.7	14.9	9.8	12.2	19.8	12.7	4.0	4.3
MOUNTAIN										
Rural Farm										
White: Male	100.0	1.3	4.9	5.6	6.0	26.7	18.4	24.9	8.0	4.1
Female	100.0	0.8	2.7	3.4	3.5	18.2	20.3	32.3	13.9	4.9
Nonwhite: Male	[1]100.0	32.9	15.3	10.0	6.3	10.1	10.4	11.5	2.7	0.8
Female	100.0	41.8	10.6	10.2	3.7	9.4	10.0	11.4	2.0	0.8
Rural Nonfarm										
White: Male	100.0	2.5	6.3	6.1	5.7	20.0	19.2	22.8	9.0	8.4
Female	100.0	1.8	4.2	4.8	4.3	16.6	21.2	29.5	11.7	5.8
Nonwhite: Male	100.0	22.5	15.5	11.7	5.7	11.3	16.2	11.9	3.3	1.9
Female	100.0	28.9	11.2	11.2	6.6	11.3	14.5	11.5	3.2	1.6
Urban										
White: Male	100.0	1.2	3.8	4.4	4.3	15.5	18.4	25.5	13.2	13.8
Female	100.0	1.1	3.0	3.9	3.5	13.8	19.1	33.2	14.0	8.4
Nonwhite: Male	100.0	4.2	11.5	10.5	7.2	13.8	20.3	18.4	8.0	6.0
Female	100.0	3.9	7.6	10.1	7.1	13.9	22.5	22.4	7.9	4.6
PACIFIC										
Rural Farm										
White: Male	100.0	2.3	6.0	6.4	6.6	23.9	17.6	23.0	8.9	5.2
Female	100.0	1.4	3.6	4.4	4.4	18.3	20.0	30.3	11.7	5.8
Nonwhite: Male	100.0	8.8	13.6	8.4	4.8	13.7	13.2	27.8	6.3	3.4
Female	100.0	5.2	7.3	9.0	4.1	15.8	14.1	35.2	7.2	2.1
Rural Nonfarm										
White: Male	100.0	2.2	5.6	5.7	6.1	19.4	20.3	23.5	9.2	8.1
Female	100.0	1.2	3.1	4.4	4.6	16.5	22.4	31.1	11.0	5.7
Nonwhite: Male	100.0	7.0	14.2	10.1	6.5	14.9	21.2	17.7	5.6	2.8
Female	100.0	5.0	9.3	9.6	6.8	15.6	21.9	22.7	6.5	2.5
Urban										
White: Male	100.0	1.4	3.3	4.4	4.3	14.2	19.5	25.4	13.9	13.5
Female	100.0	1.3	2.7	3.8	3.5	13.7	20.2	33.2	13.6	7.9
Nonwhite: Male	100.0	4.2	8.6	8.9	6.5	12.2	20.3	21.1	11.0	7.2
Female	100.0	3.4	6.3	8.2	5.9	12.2	21.9	26.3	10.6	5.2

[1] Less than 2,000 persons.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-17.—OCCUPATIONAL DISTRIBUTION OF RURAL-FARM MALES, BY COLOR AND DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation	Inside SMSA counties		Distance from nearest SMSA[1]											
			Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 to 300 miles	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total, employed males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	3.3	0.9	2.0	0.5	1.7	0.5	1.2	0.9	1.0	2.3	1.1	1.6	0.9	0.3
Farmers and farm managers	42.6	32.5	52.0	36.7	55.9	40.4	60.4	38.3	64.1	38.1	65.8	31.9	66.3	47.0
Managers, officials, and proprietors, except farm	4.6	0.6	3.0	0.3	2.8	0.3	2.1	0.3	2.1	0.9	1.6	0.8	1.4	0.6
Clerical and kindred workers	2.5	1.1	2.0	0.3	1.6	0.2	1.3	0.4	0.9	1.4	0.9	0.3	0.8	1.8
Sales workers	2.3	0.5	1.8	0.2	1.7	0.2	1.3	0.1	0.9	0.6	0.7	1.2	0.7	0.6
Craftsmen, foremen, and kindred workers:														
Foremen (n.e.c.)	1.2	0.2	0.9	0.1	0.6	-	0.4	0.1	0.4	-	0.3	0.8	0.3	0.9
Mechanics and repairmen	2.8	1.5	2.2	0.8	1.8	0.6	1.5	0.7	1.2	2.1	1.3	-	1.3	0.7
Metal craftsmen, except mechanics	1.5	0.1	1.1	0.2	0.6	0.1	0.3	0.1	0.2	-	0.1	-	0.1	-
Construction craftsmen	3.5	1.8	3.2	1.8	3.1	1.3	2.4	1.3	1.7	2.2	1.5	1.9	1.4	0.6
Other craftsmen	1.6	0.3	1.2	0.3	1.0	0.2	0.7	0.2	0.5	0.6	0.7	0.3	0.5	-
Operatives and kindred workers:														
Drivers and deliverymen	3.5	4.9	3.1	4.7	3.5	5.3	3.0	3.6	2.1	1.7	1.8	2.2	1.5	1.8
Durable goods manufacturing	4.1	1.9	4.5	2.5	2.6	1.8	1.8	1.1	0.7	0.9	0.6	-	0.3	1.5
Nondurable goods manufacturing	2.1	1.3	2.6	1.4	1.8	0.8	1.3	0.8	0.6	0.3	0.3	-	0.4	-
Nonmanufacturing industries	2.2	2.0	2.0	1.7	2.2	1.2	1.7	1.4	1.9	6.1	1.8	9.4	1.9	0.3
Private household workers	0.1	0.6	-	0.3	-	0.2	-	0.2	-	-	-	0.3	-	-
Service workers, except private household	1.7	2.8	1.3	2.2	1.0	1.3	0.9	0.9	0.8	2.6	0.6	1.6	0.5	3.9
Farm laborers and farm foremen	14.2	32.9	11.5	36.1	12.5	35.8	15.1	42.5	16.6	25.6	17.5	17.2	18.3	22.6
Laborers, except farm and mine:														
Construction	1.1	3.1	1.0	2.2	1.0	1.5	0.8	1.0	0.6	3.5	0.6	15.5	0.5	6.0
Manufacturing	1.4	3.3	1.5	4.9	1.5	3.9	1.2	2.2	1.0	1.1	0.6	2.0	0.5	0.3
Other industries	1.5	4.2	1.0	2.8	1.0	2.2	1.0	2.1	1.2	4.5	1.0	4.9	1.1	3.6
Occupation not reported	2.4	3.4	2.2	2.0	1.9	1.9	1.6	2.2	1.4	5.7	1.3	6.0	1.4	7.4

— Represents zero.

[1] For explanation of measurement procedure, see chapter 1, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-18.—OCCUPATIONAL DISTRIBUTION OF RURAL-NONFARM MALES, BY COLOR AND DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation	Inside SMSA counties		Distance from nearest SMSA[1]											
			Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 to 300 miles	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total, employed males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	10.2	2.5	7.2	2.0	7.2	2.2	7.7	2.8	7.5	5.2	8.9	6.3	8.4	6.6
Farmers and farm managers	1.5	2.8	3.1	5.2	4.3	7.3	5.4	7.3	5.6	6.7	5.1	5.6	8.1	8.6
Managers, officials, and proprietors, except farm	10.5	1.5	9.2	1.0	10.4	1.0	12.2	1.7	11.7	4.1	12.4	1.5	14.2	4.5
Clerical and kindred workers	5.5	1.8	4.9	1.2	4.3	0.8	4.2	1.2	3.9	2.7	3.8	3.0	4.4	3.9
Sales workers	6.0	0.7	5.2	0.5	5.4	0.6	5.2	1.0	4.1	0.7	3.9	1.0	4.4	1.3
Craftsmen, foremen, and kindred workers:														
Foremen (n.e.c.)	3.3	0.4	2.9	0.2	2.6	0.2	2.3	0.4	2.7	1.0	2.8	1.5	2.4	0.8
Mechanics and repairmen	6.7	3.1	6.6	2.4	6.2	2.2	6.0	2.3	6.0	3.0	5.9	2.6	5.9	2.6
Metal craftsmen, except mechanics	3.6	0.6	2.9	0.4	1.7	0.3	1.2	0.3	1.1	0.5	0.9	–	0.6	0.2
Construction craftsmen	8.0	4.5	7.8	4.2	7.8	3.6	7.7	4.5	6.9	3.9	7.1	6.2	7.2	5.0
Other craftsmen	4.2	1.2	3.7	0.9	3.6	0.8	3.4	1.1	3.6	1.8	3.8	1.8	3.3	3.9
Operatives and kindred workers:														
Drivers and deliverymen	5.6	8.2	6.4	9.5	6.9	10.0	6.7	7.8	6.3	5.3	6.7	4.2	6.3	6.4
Durable goods manufacturing	8.1	4.7	9.2	6.8	6.2	5.6	4.2	4.5	3.8	3.4	4.9	4.6	1.5	1.6
Nondurable goods manufacturing	4.1	3.3	6.7	3.9	4.5	3.0	3.4	1.6	2.9	1.7	0.8	0.5	1.3	0.3
Nonmanufacturing industries	4.9	5.5	5.4	4.9	8.0	5.6	7.7	5.5	8.3	9.1	9.0	12.3	7.9	5.7
Private household workers	0.1	1.0	0.1	0.7	0.1	0.7	0.1	0.6	0.1	0.4	0.1	0.2	0.1	0.2
Service workers, except private household	4.0	9.9	4.0	7.6	4.1	5.8	4.7	6.0	4.7	7.2	4.6	6.5	4.8	7.4
Farm laborers and farm foremen	2.9	17.7	3.2	17.4	4.6	21.8	5.8	24.0	8.5	18.4	5.3	7.2	7.7	14.0
Laborers, except farm and mine:														
Construction	1.6	6.4	1.8	5.5	2.0	4.1	2.2	4.1	1.9	5.8	2.2	11.3	2.0	8.7
Manufacturing	2.5	7.2	3.1	12.0	3.6	12.1	3.2	9.3	4.2	6.3	4.7	9.2	2.4	3.7
Other industries	2.7	10.5	2.8	9.2	3.1	8.9	3.7	9.3	3.9	9.4	4.4	8.9	4.6	9.2
Occupation not reported	4.2	6.5	3.7	4.2	3.3	3.6	2.9	4.7	2.4	3.4	2.6	5.5	2.6	5.6

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-19.—Occupational Distribution of Rural-Farm Females, by Color and Distance From Nearest Standard Metropolitan Statistical Area, for the Conterminous United States: 1960

Occupation	Inside SMSA counties		Distance from nearest SMSA[1]											
			Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 to 300 miles	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total, employed females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	12.6	4.2	13.1	5.3	12.6	4.8	12.1	3.9	14.9	6.4	15.5	-	14.3	13.8
Farmers and farm managers	8.1	7.8	8.9	8.8	9.5	11.2	10.7	12.6	11.1	13.6	11.8	31.7	11.7	1.8
Managers, officials, and proprietors, except farm	2.7	0.4	2.1	0.6	2.3	0.3	1.8	0.8	2.7	2.1	2.8	0.8	2.0	-
Clerical and kindred workers	23.3	2.9	18.2	0.9	15.3	0.5	14.3	1.1	15.1	10.4	15.5	0.8	14.0	11.7
Sales workers	6.2	0.8	5.9	0.8	6.6	0.6	5.4	0.6	5.6	4.8	5.8	2.6	4.4	2.5
Craftsmen, foremen, and kindred workers	1.0	0.2	1.0	0.2	0.9	0.2	0.8	0.2	0.8	-	0.8	-	0.4	-
Operatives and kindred workers:														
Durable goods manufacturing	3.1	1.0	4.5	0.5	2.6	0.2	1.4	0.2	5.4	-	0.3	2.2	0.4	-
Nondurable goods manufacturing	7.1	1.9	11.1	1.9	13.3	1.9	10.3	1.2	2.6	3.2	0.8	13.5	4.6	1.4
Nonmanufacturing industries	2.7	3.2	2.2	3.2	2.5	2.1	3.0	1.6	3.1	5.6	3.9	-	2.7	4.6
Private household workers	6.5	43.9	5.2	43.8	5.2	34.1	6.0	20.6	7.5	8.3	6.3	15.9	6.5	9.2
Service workers, except private household	10.2	10.8	10.2	8.4	10.5	7.0	10.6	6.3	12.8	21.9	13.9	8.8	11.2	14.5
Farm laborers and farm foremen	11.4	18.0	12.3	21.9	13.4	32.6	18.6	48.0	18.8	10.7	17.7	2.6	22.2	13.4
Laborers, except farm and mine	0.5	0.8	0.5	0.7	0.5	0.6	0.5	0.5	0.3	4.8	0.4	4.6	0.2	8.1
Occupation not reported	4.7	4.2	4.7	3.1	4.8	3.0	4.5	2.8	4.3	8.0	4.7	16.7	4.3	19.1

— Represents zero.

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-20.—OCCUPATIONAL DISTRIBUTION OF RURAL-NONFARM FEMALES, BY COLOR AND DISTANCE FROM NEAREST STANDARD METROPOLITAN STATISTICAL AREA, FOR THE CONTERMINOUS UNITED STATES: 1960

Occupation	Inside SMSA counties		Distance from nearest SMSA[1]											
			Less than 50 miles		50 to 99 miles		100 to 149 miles		150 to 199 miles		200 to 249 miles		250 to 300 miles	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Total, employed females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	13.1	5.2	11.7	6.2	13.1	7.2	14.4	7.7	15.3	9.8	15.7	8.6	16.8	17.5
Farmers and farm managers	0.2	0.5	0.3	0.9	0.4	1.7	0.5	2.0	0.4	1.0	0.5	3.8	0.4	2.3
Managers, officials, and proprietors, except farm	4.0	1.0	3.8	0.9	4.9	1.0	6.0	1.1	7.1	1.5	7.5	2.6	6.4	2.5
Clerical and kindred workers	29.3	3.3	22.8	1.4	21.0	1.2	20.8	2.4	21.6	12.0	22.8	14.0	21.0	14.1
Sales workers	8.0	0.9	7.9	0.7	9.5	0.9	9.7	1.6	9.6	2.7	9.2	2.4	10.0	3.7
Craftsmen, foremen, and kindred workers	1.3	0.3	1.2	0.3	1.1	0.2	1.1	0.6	0.8	0.7	0.9	1.0	1.0	0.3
Operatives and kindred workers:														
Durable goods manufacturing	5.6	1.0	6.3	1.0	3.8	0.4	1.6	0.7	1.1	1.4	0.7	1.9	0.4	0.3
Nondurable goods manufacturing	10.2	3.2	18.1	4.5	14.2	3.9	9.1	2.1	3.9	2.2	1.0	1.2	3.6	0.8
Nonmanufacturing industries	2.9	4.8	2.6	4.5	3.1	3.6	3.6	3.6	3.6	5.0	3.8	3.2	3.4	2.5
Private household workers	5.0	47.1	5.6	52.7	6.0	49.3	7.6	41.0	9.0	13.6	7.8	11.8	8.3	12.8
Service workers, except private household	14.0	19.0	14.1	15.8	16.5	14.5	19.7	15.6	21.8	30.1	26.8	32.9	22.7	27.5
Farm laborers and farm foremen	0.7	7.3	0.7	6.1	1.0	11.2	1.1	15.5	1.1	2.8	0.7	1.8	1.4	1.7
Laborers, except farm and mine	0.6	1.0	0.7	1.0	0.7	1.2	0.6	1.3	0.7	3.0	0.7	3.3	0.6	2.1
Occupation not reported	5.0	5.6	4.6	3.9	4.6	3.8	4.1	5.1	4.1	8.0	4.0	11.4	3.9	11.8

[1] For explanation of measurement procedure, see chapter I, page 17.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-21.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING MEDIAN INCOME OF WHITE FAMILIES

1. Rural-Farm Population of the Conterminous United States: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]1972.8974	109.3823	-
Average value of farmland and buildings per farm	[1].0008	.0003	.0468
White male unemployment rate	[1]59.2255	3.9512	.2132
Percent of rural-farm white males who are aged:			
15 to 24 years	3.1448	3.0931	.0167
25 to 44 years	1.5150	2.4743	.0106
Percent of rural-farm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1]-24.3191	.7963	-.4912
12 years or more of school	[1]2.0907	.4919	.0604
Percent of employed rural-farm white males who are:			
Farmers and farm managers	-1.4117	.8877	-.0353
Craftsmen, foremen, and kindred workers	-2.4040	2.1448	-.0202
Farm laborers and farm foremen	[1]14.0221	1.6034	.1725
Operatives and kindred workers	3.7349	1.7417	.0415
Average size of rural-farm white family	[1]208.9044	21.7612	.1241
Percent of employed rural-farm white females	[1]11.5905	1.2030	.1356
Proximity to metropolitan centers	[1]34.5830	14.3529	.3423

Multiple correlation coefficient .7031

Standard error of estimate 49.7260

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

2. Rural-Nonfarm Population of the Conterminous United States: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3678.9321	116.9958	-
White male unemployment rate	[1]50.4300	4.3502	.1664
Percent of rural-nonfarm white males who are aged:			
15 to 24 years	[1]-17.8028	2.8629	-.1157
25 to 44 years	5.5443	3.0975	.0338
Percent of rural-nonfarm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1]-28.0043	1.0587	-.4621
12 years or more of school	1.7017	1.2500	.0238
Percent of employed rural-nonfarm white males who are:			
Farmers and farm managers	[1]-20.3489	2.4502	-.1343
Craftsmen, foremen, and kindred workers	[1]-10.3037	2.3558	-.0773
Farm laborers and farm foremen	[1]14.9965	2.0860	.1125
Operatives and kindred workers	[1]9.5600	1.5071	.1080
Average size of rural-nonfarm white family	[1]140.0004	22.2209	.1120
Percent of employed rural-nonfarm white females	[1]17.5251	1.6663	.1647
Proximity to metropolitan centers	[1]39.9632	16.4060	.3597

Multiple correlation coefficient .7025

Standard error of estimate 541.8636

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-21.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING MEDIAN INCOME OF WHITE FAMILIES—Con.

3. Rural-Farm Population of the Northeast Region: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3495.6962	22.6661	-
Average value of farmland and buildings per farm	[1].0039	.0014	.2318
White male unemployment rate	[1]30.4308	11.8540	.2039
Percent of rural-farm white males who are aged:			
15 to 24 years	[1]20.2352	8.7467	.2448
25 to 44 years	8.3869	8.1619	.1266
Percent of rural-farm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	-.6573	4.6653	-.0122
12 years or more of school	[1]-7.8184	3.6508	-.2134
Percent of employed rural-farm white males who are:			
Farmers and farm managers	[1]8.3395	3.2637	.2986
Craftsmen, foremen, and kindred workers	-2.4214	6.3486	.0332
Farm laborers and farm foremen	[1]-13.6663	5.5019	-.2562
Operatives and kindred workers	-8.2506	5.9375	-.1229
Average size of rural-farm white family	-26.5351	70.6464	-.0265
Percent of employed rural-farm white females	-3.2514	4.4156	-.0784
Proximity to metropolitan centers	[1]17.8100	4.2419	.3740

Multiple correlation coefficient .5115

Standard error of estimate 318.2960

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

4. Rural-Nonfarm Population of the Northeast Region: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]6333.1922	28.1315	-
White male unemployment rate	-2.6130	16.3657	-.0120
Percent of rural-nonfarm white males who are aged:			
15 to 24 years	-9.1905	13.2877	-.0597
25 to 44 years	[1]94.0950	13.5390	.9974
Percent of rural-nonfarm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	-6.9749	9.5325	-.0649
12 years or more of school	[1]-61.5770	9.0657	-.8374
Percent of rural-nonfarm white males who are employed as:			
Farmers and farm managers	[1]113.3973	38.1579	.2381
Craftsmen, foremen, and kindred workers	-.0577	9.4301	-.0006
Farm laborers and farm foremen	[1]-92.6619	24.6625	-.3151
Operatives and kindred workers	[1]-11.4222	5.4980	-.1725
Average size of rural-nonfarm white family	-155.1226	112.6305	-.0931
Percent of employed rural-nonfarm white females	-11.1417	6.6644	-.1606
Proximity to metropolitan centers	4.7989	5.5654	.0623

Multiple correlation coefficient .6424

Standard error of estimate 414.3987

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-21.—Selected Results of the Analysis of Factors Influencing Median Income of White Families—Con.

5. Rural-Farm Population of the North Central Region: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]1963.5450	12.4327	-
Average value of farmland and buildings per farm	[1].0021	.0006	.1110
White male unemployment rate	[1]47.1781	5.9088	.2170
Percent of rural-farm white males who are aged:			
15 to 24 years	5.9859	5.6645	.0187
25 to 44 years	3.6787	5.4366	.0213
Percent of rural-farm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	-1.5758	2.3115	-.0221
12 years or more of school	[1]9.2599	1.8787	.1676
Percent of employed rural-farm white males who are:			
Farmers and farm managers	-2.5682	1.8771	-.0765
Craftsmen, foremen, and kindred workers	-3.6352	3.4863	-.0374
Farm laborers and farm foremen	-.8218	3.1208	-.0087
Operatives and kindred workers	[1]29.9387	3.5696	.3802
Average size of rural-farm white family	[1]123.7281	35.3384	.0866
Percent of employed rural-farm white females	[1]7.5803	1.6641	.1084
Proximity to metropolitan centers	[1]25.2684	2.2006	.3285

Multiple correlation coefficient .... .7331

Standard error of estimate 348.0403

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

6. Rural-Nonfarm Population of the North Central Region: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3258.6597	12.2680	-
White male unemployment rate	[1]54.7178	6.4202	.2029
Percent of rural-nonfarm white males who are aged:			
15 to 24 years	-1.7340	4.3818	-.0108
25 to 44 years	[1]11.3778	5.1930	.0637
Percent of rural-nonfarm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	.1874	2.6816	.0021
12 years or more of school	[1]12.6249	3.0252	.1389
Percent of rural-nonfarm white males who are employed as:			
Farmers and farm managers	[1]-9.3162	3.7016	-.0820
Craftsmen, foremen, and kindred workers	-3.7239	3.5792	-.0298
Farm laborers and farm foremen	7.2826	3.7985	.0488
Operatives and kindred workers	[1]24.7284	2.4735	.3165
Average size of rural-nonfarm white family	-12.2723	33.5311	-.0098
Percent of employed rural-nonfarm white females	5.3365	2.7334	.0679
Proximity to metropolitan centers	[1]32.9030	2.4934	.3685

Multiple correlation coefficient .... .7385

Standard error of estimate 398.4693

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-21.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING MEDIAN INCOME OF WHITE FAMILIES—Con.

7. Rural-Farm Population of the South: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]2505.9827	8.8299	-
Average value of farmland and buildings per farm	[1].0006	.0003	.0634
White male unemployment rate	[1]-18.4914	4.1622	-.1091
Percent of rural-farm white males who are aged:			
15 to 24 years	[1]6.1333	2.9083	.0601
25 to 44 years	[1]5.5823	2.1865	.0720
Percent of rural-farm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	-.4696	.9251	-.0147
12 years or more of school	.5915	.7669	.0199
Percent of employed rural-farm white males who are:			
Farmers and farm managers	[1]-6.9789	.8947	-.2638
Craftsmen, foremen, and kindred workers	[1]-5.7060	2.0932	-.0753
Farm laborers and farm foremen	[1]-4.5616	1.5749	-.1008
Operatives and kindred workers	[1]-5.5499	1.4886	-.1143
Average size of rural-farm white family	[1]76.3140	24.5008	.0839
Percent of employed rural-farm white females	[1]7.1198	1.2627	.1403
Proximity to metropolitan centers	[1]41.7186	1.8222	.5257

Multiple correlation coefficient .... .6154

Standard error of estimate 323.3562

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

8. Rural-Nonfarm Population of the South: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]3924.7804	12.6849	-
White male unemployment rate	[1]-27.4610	6.5055	-.1122
Percent of rural-nonfarm white males who are aged:			
15 to 24 years	-3.2645	3.5740	-.0319
25 to 44 years	-2.0279	3.9054	-.0181
Percent of rural-nonfarm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1]5.4619	1.6319	.1071
12 years or more of school	[1]3.2105	1.6224	.0613
Percent of employed rural-nonfarm white males who are:			
Farmers and farm managers	[1]-40.2984	3.2271	-.3207
Craftsmen, foremen, and kindred workers	[1]-11.0175	2.9084	-.1158
Farm laborers and farm foremen	[1]-9.5340	2.6774	-.1018
Operatives and kindred workers	[1]-8.9809	2.0195	-.0141
Average size of rural-nonfarm white family	39.0655	27.5845	.0488
Percent of employed rural-nonfarm white females	[1]15.1946	2.1087	.2082
Proximity to metropolitan centers	[1]45.3970	2.7890	.3970

Multiple correlation coefficient .... .5929

Standard error of estimate 477.8304

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-21.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING MEDIAN INCOME OF WHITE FAMILIES—Con.

9. Rural-Farm Population of the West: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]4246.7215	9.4560	-
Average value of farmland and buildings per farm	[1].0003	.0001	.1026
White male unemployment rate	[1]7.0231	1.6650	.1391
Percent of rural-farm white males who are aged:			
15 to 24 years	-.3715	1.2570	-.0114
25 to 44 years	.1442	1.1424	.0001
Percent of rural-farm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1]-1.6914	.6947	-.0934
12 years or more of school	-.1037	.1239	-.0311
Percent of employed rural-farm white males who are:			
Farmers and farm managers	.8790	.4813	.0985
Craftsmen, foremen, and kindred workers	.7524	1.0163	.0382
Farm laborers and farm foremen	.7204	.6973	.0535
Operatives and kindred workers	1.7222	.9565	.0808
Average size of rural-farm white family	[1]-18.9961	9.0191	-.0798
Percent of employed rural-farm white females	.0504	.5839	.0032
Proximity to metropolitan centers	[1]16.0826	.9808	.6819

Multiple correlation coefficient .7171

Standard error of estimate 103.4924

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

10. Rural-Nonfarm Population of the West: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]5203.8391	4.8613	-
White male unemployment rate	[1]7.6599	1.8075	.1700
Percent of rural-nonfarm white males who are aged:			
15 to 24 years	1.2777	1.3330	.0452
25 to 44 years	2.2557	1.3820	.0742
Percent of rural-nonfarm white males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1]-1.8861	.7330	-.1277
12 years or more of school	-.5922	.3745	-.0678
Percent of employed rural-nonfarm white males who are:			
Farmers and farm managers	[1]-2.3241	1.0224	-.1048
Craftsmen, foremen, and kindred workers	-1.8431	1.0542	-.0805
Farm laborers and farm foremen	[1]2.4349	.8669	.1376
Operatives and kindred workers	-.2058	.7084	.0128
Average size of rural-nonfarm white family	[1]-47.4593	11.5452	-.2041
Percent of employed rural-nonfarm white females	[1]2.3422	.8558	.1187
Proximity to metropolitan centers	11.8063	.8857	.5620

Multiple correlation coefficient .6631

Standard error of estimate 98.8918

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

Table A-22.—SELECTED RESULTS OF THE ANALYSIS OF FACTORS INFLUENCING MEDIAN INCOME OF NONWHITE FAMILIES

1. Rural-Farm Population of the South: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]1308.8167	9.0236	-
Average value of farmland and buildings per farm	[1]-.0156	.0002	-2.1337
Nonwhite male unemployment rate	-.0670	1.2781	-.0008
Percent of rural-farm nonwhite males who are aged:			
15 to 24 years	-.4459	.9710	-.0127
25 to 44 years	[1]2.2039	.8810	.0674
Percent of rural-farm nonwhite males aged 25 years and over, who have completed:			
0 to 6 years of school	.2520	.3843	.0174
12 years or more of school	.0136	.6380	.0005
Percent of employed rural-farm nonwhite males who are:			
Farmers and farm managers	[1]-2.9384	.4507	-.1725
Craftsmen, foremen, and kindred workers	-.6994	1.4843	-.4712
Farm laborers and farm foremen	[1]-.9934	.4523	-.0641
Operatives and kindred workers	[1]-1.8727	.6977	-.0655
Average size of rural-farm nonwhite family	-1.9736	5.8394	-.0120
Percent of employed rural-farm nonwhite females	[1]1.6374	.4751	.0847
Proximity to metropolitan centers	[1]26.0272	1.3811	.4373

Multiple correlation coefficient .... .5715

Standard error of estimate 339.1110

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

2. Rural-Nonfarm Population of the South: 1959

Independent variable	Regression coefficient	Standard deviation	Beta coefficient
Constant term	[1]1150.7622	10.1168	-
Nonwhite male unemployment rate	[1]116.4463	9.5878	.2678
Percent of rural-nonfarm nonwhite males who are aged:			
15 to 24 years	1.0595	1.1341	.0229
25 to 44 years	[1]2.8307	.9150	.0750
Percent of rural-nonfarm nonwhite males, aged 25 years and over, who have completed:			
0 to 6 years of school	[1].9993	.5053	.0516
12 years or more of school	.3080	.8642	.0083
Percent of employed rural-nonfarm nonwhite males who are:			
Farmers and farm managers	[1]-4.7462	1.2259	-.0864
Craftsmen, foremen, and kindred workers	[1]-2.9785	.9633	-.0679
Farm laborers and farm foremen	[1]-4.0697	.6122	-.1583
Operatives and kindred workers	-.1961	.7170	-.0067
Average size of rural-nonfarm nonwhite family	6.1736	6.1848	.0284
Percent of employed rural-nonfarm nonwhite females	[1]2.4378	.5946	.0934
Proximity to metropolitan centers	[1]28.5824	1.5340	.4144

Multiple correlation coefficient .... .6075

Standard error of estimate 381.0886

— Represents zero.

[1] The regression coefficient was significantly different from zero at the .05 level.

Source: Retabulated and computed from data in 1960 Census of Population.

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